THE PHI DELTA KAPPAN

Vol. V APRIL 1923 No. 3

Skepticism

IT is better to be skeptical of all new ideas and to insist upon being shown rather than to rush around in a continuous brainstorm after every new idea. Skepticism, if by that we mean cautiousness, is the balance wheel of civilization. Most of the present acute troubles of the world arise out of taking on new ideas without first carefully investigating to discover if they are good ideas.

—HENRY FORD

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Supplement to

THE PHI DELTA KAPPAN

VOL. V APRIL, 1923 No. 3

The World Conference on Education

1. Purpose. To afford opportunity for educators of the various nations to agree upon principles and plans for the promotion of goodwill and mutual understanding, which are universal in their application and which can be adopted as a definite program to be carried out in the schools throughout the world.

2. Date and Place. The Conference will be held in San Francisco, California. It will open with a plenary session on the evening of June 28, 1923, and will close with a joint session with the National Education Association of the United States on Thursday, July 5. The Sixty-first Annual Convention of the National Education Association will be in Oakland-San Francisco, July 1-6, 1923.

3. Auspices. The World Conference on Education is being held under the auspices of the National Education Association of the United States.

4. Delegates. Invitations have been issued to fifty different nations to send delegates. Each nation has been asked to send five official delegates, five alternates, and as many unofficial delegates as it wishes. If all nations respond there will be some 500 delegates and alternates. There are also a thousand professors from foreign institutions teaching in American colleges and universities and 15,000 foreign students, who are invited to sit with the delegations from their respective countries in the plenary sessions and to act as interpreters.

5. Plans for the Conference. The Committee on Foreign Relations of the National Education Association was instructed by the Representative Assembly at Des Moines in 1921 to work out plans for this Conference in 1923. A report of the progress was made to the Representative Assembly at Boston in 1922, and by unanimous vote the Committee was instructed to carry through the project. Dr. Augustus O. Thomas, state superintendent of public schools, Augusta, Maine, who is chairman of the Foreign Relations Committee and working in cooperation with the president, secretary and other officers of the Association, has been in charge of the plans and will be responsible for seeing that they are properly carried out. President Owen has appointed a large advisory committee.

6. Agenda. The World Conference is called to work out a program rather than to approve one that has already been prepared. However, the Foreign Relations Committee is preparing tentative agenda, including a proposal for a world goodwill day to be observed in all schools throughout the world. These agenda are being submitted to a large advisory committee for suggestions. Supplemented by proposals from delegates from other countries they will form the basis of the deliberations of the Conference.

7. Among the Speakers. President William B. Owen of the National Education Association and President W. G. Cove of the British National Association, who spoke at the Boston meeting last summer, are among speakers already arranged for.

8. Special Features. The great virtues which are common to civilized people everywhere and the contributions of the various nations to civilization will be visualized in a magnificent pageant, The Court of Service. One session will be devoted to a festival of folk songs and dances, given in native tongue and costume.

9. Results Expected. This Conference is called for the purpose of adopting definite objectives which can be put into practice immediately in the various educational systems of the world. Every child in every school in every country should have his work modified as a result of its deliberations. It will afford abundant opportunity for assembling facts on the educational situation in various countries, and for renewing old international friendships and for forming new ones, but its great mission will be a code of work designed to give the 5,000,000 teachers of the world a definite program for the promotion of mutual goodwill and understanding among all peoples. Arrangements will also be made at this Conference for future world conferences to be held at regular intervals.

PERSONALS

(Continued from Page 32)

Tyler, Samuel (Epsilon 156), Superintendent of Schools, Riceville, Iowa—I have been located in this position during the past five years. Our enrollment has grown from around 280 to 330 in that time and we find ourselves so crowded that on March 9th bonds will be voted to building a new $70,000 high school building.

Uphaus, Willard E. (Alpha 208)—I am spending my second year in the Yale Divinity and Graduate Schools. I received the M. A. degree in Education last year, and hope to receive the Ph. D. degree in 1924 or 1925, depending on the progress made and the outside work I have to do.

Van Slyck, Willard N. (Kappa 37)—Returned to Salina (Kansas) as Principal of High School August 1, 1921. I have two prospective school men in my home, William, Jr., four and one-half years, and Harold Eugene, two years. From the disposition they have displayed up to this time I have no doubt but what they will make successful school administrators. As is usual in all well regulated families the boys both take their good qualities from their mother.

Varner, Glenn F. (Eta 232), Teacher in High School, St. Paul, Minnesota—I have just completed a study which shows that pupils with I. Q.'s of 115 or better are about 160 per cent as efficient in learning history facts as are pupils with I. Q's of 100 to 115. And that pupils with I. Q.'s below 100 are only 60% as efficient as those with I. Q's of 100 to 115.

Vasey, Frank T. (Epsilon 176), Superintendent of Schools, Mason City, Iowa—Now engaged in reorganizing the school system in the light of present day conceptions of intelligence and mental growth of children. Erected six buildings since 1917. City is now sixteen rooms ahead of needs. No buildings erected during changing price levels.

Wagner, Charles A. (Zeta 289), Bowling Green, Ohio—The first of February I began teaching in the Department of Education in the Bowling Green State Normal College—one of Ohio's State Teachers' Colleges. My first impressions are most favorable. The buildings and equipment are new, and the student enrollment is growing rapidly. There is a fine spirit of co-operation in the school which makes one feel that the institution is building well as it grows.

Wagoner, Winfred E. (Alpha 121), Indianapolis, Indiana—Resigned the county superintendency of Rush County on November 7, 1922, to accept appointment as Assistant State School Inspector of the State of Indiana.

Wanerus, Theodore A. (Epsilon 57), Gillette, Wyoming—Theodore Wanerus was elected State Senator from Campbell County, Wyoming, in the November, 1922, election. He is editor of the Gillette News. While editing the paper he organized the Campbell County High School and served as superintendent of that school for one year. At the present time he is a member of the Campbell County High School Board of Education. In the state senate he was a member of the education committee.

Watkins, Ralph K. (Gamma 109)—Candidate for Ph.D. at coming commencement, University of Missouri. Subject of dissertation: "The Technique and Value of Project Teaching in General Science."

Weber, Joseph J. (Beta 361), University of Texas, Austin, Texas—Shall be in Cleveland for the N. E. A. Department o Superintendence meeting, where I am scheduled to address the Visual Instruction Section. The title of my address will be "The Educative Value of Stereographs, Photographs and Lantern Slides." The address will be a resume of my research work at the University of Kansas last year. The data have been written up in the form of a 100-page monograph which will be published some time this coming spring. My Doctor's thesis, "Comparative Effectiveness of Some Visual Aids in Seventh Grade Instruction," is the first authoritative treatise of the subject of visual instruction, and it can be obtained from The Educational Screen, Inc., 5 So. Wabash Ave., Chicago, Illinois. Price $1.50.

West, Paul V. (Phi 63), School of Education, University of Wisconsin—I will give courses again as visiting instructor in the School of Education, University of Chicago during the coming summer—both terms. (Mental Tests, Experimental Education, Statistical Methods). I am especially interested in working out two new diagnostic tests, one being a "Quickness and Accuracy of Decision Test," the other a test of Ability to Comprehend Passages Read Aloud. Am making a special study of the various Intelligence Tests, especially the Herring and the Stanford Re-

(Continued on Page 4)

OF COURSE

You Wish to Continue to Receive the National Magazine

The National Constitution specifically provides that the national membership fee must be paid in advance. Only members in good standing will receive the National Magazine.

Keep in mind that the Fourteenth Fiscal Year closes June 30, 1923. Look at your membership card. If it expires June 30, 1923, you will cease receiving the National Magazine on that date, unless you pay both your national membership fee, and your local active (not alumnus) chapter dues for the ensuing—the 15th—fiscal year, which begins July 1, 1923.

Remember, the Phi Delta Kappan becomes a bi-monthly publication July, 1923.

The National membership fee is One Dollar ($1.00). You know what your chapter dues are. Send your remittance AT ONCE for both national and local dues to your chapter treasurer, and thus be paid up for the Fifteenth Fiscal Year.

Fill in the blank below and send it with your remittance.

Membership Fee Remittance for 15th Fiscal Year

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(Signed).....
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City, Town or P. O......*State*.....

Send your remittance to your active Chapter Treasurer, and not to the National Secretary. You will find your Chapter Treasurer's name and address on the inside front cover page.

PERSONALS

(Continued)

visions, the National Haggerty Delta 1, Detroit First Grade and Pressey Primer Scale and Dearborn Test for Primary Grades, with notation of their intercorrelations and value for classification purposes. The value of weighting test items in group tests is the subject of one investigation under way, also improvement in tests with practice is another.

Wheeler, Herbert E. (Epsilon 41)—A severe attack of neuritis and rheumatism caused me to give up my work in Austin, Minnesota, in June, 1921, and I came here to Santa Ana, California, for rest and recuperation. The immediate cause of this attack was the work and responsibility connected with the erection of an $850,000 modern Junior-Senior High School at Austin. I am now recovering my health.

Wilkerson, Leroy (Epsilon 226), University of Iowa—The Educational Research Department of the University is engaged in determining the school costs for the state of Iowa for the past ten years. We are working under an endowment of $13,000 granted us by the "Educational Finance Inquiry." The survey was begun last October and will continue until the first of September, when we hope to publish an exhaustive report of our findings. The work is under the personal directions of Dean William F. Russell of the Department of Education and Dr. Raleigh W. Stone of the Department of Economics. Assisting in the survey are L. R. Wilkerson, C. L. Huffaker, T. C. Holy, H. H. Davis, M. C. Del Manzo, W. F. Delaney all graduate students of the University and members of Epsilon chapter.

Wood, Albert G. (Alpha 70), Baldwin City, Kansas—Spent a very profitable summer at Kansas State Agricultural College, getting an agriculturalist's viewpoint toward the study of botany. Wonder why botany is not offered in more high schools in Kansas? I suggest it as a problem to some of our state brothers.

Workman, C. M. (Epsilon 248), Superintendent of Schools, Villisca, Iowa—Expect to return to State University at Iowa City next summer and take the Master's degree.

TEAR OFF ON THIS LINE

Turn this sheet over and then do what it says on the other side

Behold, Brother!

YOU have just finished this issue of your National Magazine. The blank on the opposite side has been prepared for your **special** convenience. Fill it in, please—do not delay—and send it with the necessary remittance to your local chapter treasurer—there is no other way in Phi-Delta-Kappadom—nor outside of it—whereby you can receive the National Magazine.

The Official National Organ of Phi Delta Kappa

THE PHI DELTA KAPPAN

Continuing the National News Letter of Phi Delta Kappa

Published November, February, April, and June at Chicago, Illinois

By the Phi Delta Kappa Fraternity

ABEL J. McALLISTER, Managing Editor

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VOL. V APRIL, 1923 No. 3

Research in Education

There is a growing realization of the fact that research on a nationwide basis is essential to rapid progress in educational theory and practice. Many of the problems which present themselves can be studied in laboratories of higher institutions or by groups of investigators working under subsidies from research foundations. The great majority of problems, however, can be studied effectively only in the classroom, the superintendent's office, or the local community. The solution of most of these problems must of necessity come through deliberate studies carried on by teachers and school officers who are in close contact with important problems in their natural setting.

The members of Phi Delta Kappa are committed to the task of aiding in the scientific study of both practical and theoretical problems. The series of articles which follow describe a wide range of significant possibilities for constructive effort on the part of every member of the Fraternity. These articles should prove genuinely interesting, instructive, and inspiring to a group of men bound together because of their devotion to the ideal of research.

In our participation in scientific studies, we, as Phi Delta Kappa men, can never afford not always to keep clearly in the foreground that open-minded attitude expressed by the late Theodore Roosevelt, to "want nothing so much as to be right."

WILLIAM S. GRAY, National President

1. Opportunities for Research in Educational Finance

Carter Alexander, Assistant Director, The Educational Finance Inquiry

The research ideal of Phi Delta Kappa takes for granted that the investigations of members will be worth while. But a man starting a research, no matter how capable he is, runs serious danger of wasting his time, unless he first asks himself and satisfactorily answers four questions: Is there demonstrable need for research in this field? Just what problems in it most need to be investigated, and why? What methods should be used? For what problems in it am I so well equipped personally that I can reasonably hope for success?

For researches in educational finance there is no need to answer the first question. A man in education who does not know that researches are badly needed in this field at the present time either has been asleep or has too low an I. Q. to do research. But on the other three questions, many men who are hunting problems for investigation ought to be helped by the analyses and suggestions of one who has had unusual opportunities to analyze most of the difficulties involved in financing education. Accordingly, this paper undertakes to answer these three questions in order.

I. NEEDED RESEARCHES

1. What are the available materials in a given unit, as a state or the city school systems of a state, and to what important uses may such materials be put?

Researches always increase greatly in number and usefulness when investigators can find materials without going up too many blind alleys, and when they are stimulated to think of the possibilities involved in studying the accessible data. There is need in every state for at least a Master's thesis which will survey the documents and records available in that state for researches in educational finance and indicate clearly, forcefully and specifically the potential values of such researches for improving schools. A professor of administration or a director of educational research who will initiate and see through a creditable thesis of this kind for his state ought easily to count on having within five years a dozen fruitful theses from men who will utilize the materials and suggestions made available by the first thesis. If the original thesis is published so that schools of education everywhere can get at the materials, the resulting valuable theses may reasonably be expected to number several dozen within five or ten years. The Educational Finance Inquiry has done part of this very thing in working up an extensive bibliography on educational finance which contains annotated references to the known special treatments in this field for each state. But it has not been able to cover the routine documents or fiscal records, or to make suggestions as to their use, such as could be made only by a man working in the state and familiar with its fiscal procedures. Such a man, concentrating on the matter, could inform investigators of many sources they might otherwise miss. For instance, the most accurate and full knowledge of variations in tax burdens in several states appears to be possessed by certain railroad administrations, a thing which would probably never cross the mind of most outside men seeking a thesis problem in educational finance for those states.

2. Just what practical and reasonably attainable changes are needed in records, reports, methods of reporting, time of making the budget, and the like, of a given unit, as a state or the city systems of a state, to make the school fiscal data thoroughly useful and why?

It is not enough to say glibly that all the state needs to do is to make its records and reports correspond to the report of the Committee on Uniform Records and Reports of the National Educational Association and the U. S. Bureau of Education. Such correspondence should be secured of course. But in most states this would be only a beginning. The great need is to show exactly how to draw up the forms, keep the records, and make the reports *under the laws* of the specific state. Some changes may be needed in the state law or state department requirements but they will not come until someone knows to a word and phrase just what these needed changes are. That someone is almost certain to be a man outside the whirl of work in the state department itself, who can quietly study the whole situation. It is no accident that the State of New York has perhaps the most complete fiscal data on schools of any state, even though it cannot legally compel districts to keep its prescribed forms. The data are secured through a system of records carefully worked out by a committee of school men in cooperation with the State Department, but the initiative for the accomplishment came from research men in a university school of education. The executive secretary of the University of the State of Washington has done notable pioneer work in cost studies of higher education in his state. He hopes, as do many others, that his system, or an improvement of it, may be adopted by institutions in other states. But he never expects this to come about except through giving very specific illustrations and detailed forms for keeping accounts, and through showing the exact uses of importance to which the resulting data can be put. (1)

3. What are the needed new techniques for securing valuable results from data already available?

For every research worker willing to work at a technique for finding the truth of educational finance from existing data, there are probably ten eager to tackle such a problem with a questionnaire for new data. The ten usually give up when convinced by some experienced person that such a questionnaire will not be answered, or when they send it out and get no replies. This is most unfortunate. Many of the biggest contributions in ed-

(1) Stevens, Edwin B. How Much Does Higher Education Cost? U. S. Bureau of Education, Higher Education Circular No. 17, August, 1919.

ucation have been made by men willing to work with already recorded data. But these men developed technique that forced the truth from the data in spite of defects in the latter. Studies of retardation and elimination for years did a great deal of good when the number of children entering the first grade in a past year could not be definitely known and had to be computed by skillful techniques from enrollment data. Ayres has nearly always applied his rare powers to existing data instead of collecting new materials. He appears to be doing the same thing in his present researches connected with his banking activities. Burgess did the same thing in his Trends of School Costs. A particularly good example is the achievement of the men in the Bureau of Economic Research in their study of the Income of the United States, a brilliant piece of work due solely to the development of new techniques for using published data. If further argument need be advanced, one may note that the man who develops a technique for handling existing data can study the present, trace trends from the past, and predict the future. The man who collects new data can, in general, hope only for a cross section at one time, with no possibility of studying the past or predicting the future.

The Educational Finance Inquiry has in the main used existing data by the development of new techniques. Among such techniques are those for computing elementary per-pupil costs when school fiscal records have not kept elementary expenditures separate from secondary; for measuring the significance of differences in cities for fiscal independence; for determining the average life of school buildings and the consequent allowance for depreciation; for getting the total "economic cost" (2) per pupil; for determining the total "economic cost" for a state at some future year when such cost is known for one year only. All these are for the data available in the State of New York.

There is abundant need for such techniques in using similar data in other states. For instance, the income tax situation in New York made possible a technique which will not work where the state has no income tax. In most states, there is need for a technique which will show the exact tax burden on a unit piece of property which is in half a dozen or so tax districts, few of them co-terminous. The need is especially insistent for "prediction" techniques, which are so important that they will be treated separately in the following section.

4. What prediction techniques are needed?

Everywhere there is insistent demand from the public for straightforward reliable estimates of the costs which the taxpayers will be called upon to meet for educational programs already started or proposed. On most matters such estimates cannot be prepared until new prediction techniques have been devised. Just what these techniques ought to be or will be, it is impossible to say just now. Probably they will have to be worked out for individual school systems or institutions and then generalized. Possibly they will involve much study of history for similar situations, or of the procedure employed by economists, government statisticians, or by business corporations with research staffs. Indeed, keen observers say that the business organizations best weathering the present stringency are those which have learned to plan far ahead and to predict future conditions in their fields fairly accurately. Of course they can do little in the way of accurate prediction until after considerable gathering of the necessary facts. It seems reasonably certain that the prediction techniques for educational finance must, in large measure, be based upon per-pupil costs, since increases in educational costs often involve greater enrollments or outputs.

Working out these prediction techniques will not be easy. On the other hand, we need not consider them impossible. In business, Ayres, with presumably the same abilities he used in education, has already successfully predicted the big automobile business of 1921, the trends of building costs, and in February of 1922 even foretold exactly the month of September of that year as the one when bonds would be highest. (3) There may not be another Ayres but the techniques he uses in business are so plain and straight when he has once worked them out that they ought to stimulate educational research workers to adapt them or to devise similar techniques for educational predictions. Furthermore, we have a number of successful prediction techniques in education itself. They have been well worked out for building programs in city surveys by Strayer, Englehardt and Packer. The University

(2) "Economic cost" includes in addition to current expense, allowances for interest on money invested and depreciation of all plant and equipment now in use. It may be computed for public and non-tax supported schools, either singly or combined.

(3) Collier's Weekly, February 3, 1923, pp. 13-14.

of Minnesota developed a noteworthy prediction technique in studying its probable future enrollments. But many other needed prediction techniques are yet only things hoped for, or at any rate unpublished. Some of them have been worked out by the Educational Finance Inquiry in its study of the State of New York, but several of these probably cannot be applied without considerable change to other states. There is still plenty of room for prediction techniques for different states on computing probable future costs for such things as: Fully carrying out the state's present compulsory education program; extending the compulsory age limits; extending the school term; extending permissive educational work; the probable increase in attendance at certain high schools, teacher training institutions and universities; increasing tuition for non-residents at state higher institutions; proposed salary schedules; (4) proposed state aid plans; having all teachers trained to the stages frequently advocated; establishing junior colleges. (5)

5. How do certain educational fiscal policies really work?

Like other fields, educational finance has many nostrums and some sensible remedies, most of both kinds advocated by persons with the best of intentions. But before much healing can be expected from either kind, we need far more accurate knowledge as to what they will do or will not do under certain conditions than is now available. Examples are such things as the merit system, minimum salary laws, various pension proposals, the single salary schedule, equal pay, various plans for state aid, raising tuition for non-residents at higher institutions, state payment of high school tuition for pupils not living in high school districts, separate high school organization as in the township system of Illinois, various consolidation plans, increasing the training required of teachers, the mill tax for higher institutions, and the like. We have acres of printed propaganda and allegations on all of these things, but it is somewhat dangerous to continue prescribing them for new patients until we get many additional facts as to how they work, or at least scientific predictions as to how they may be expected to work.

In particular, we need to know how every state raises the money to support its schools. We need to know the real practice on taxation for schools, just how it works out and just which types of property really bear the burden. Swift and his students have done excellent work in this field for several states. Russell and Lindsey in Iowa have done valuable pioneer work on the technique for discovering actual tax burdens for schools. But in most states much remains to be done in these matters. Still more remains to be done in general taxation in most states, for in many of them reform in school taxes cannot come save in connection with general tax reform.

6. What can a given fiscal area afford to spend for schools, considering its resources and its other civic needs?

Many such areas refuse school expenditures or dash into them without the careful study which alone could make possible a permanently satisfactory decision. Recently the school authorities of a large city campaigned for a bond issue for school buildings. They were opposed by various organizations of prominent business men, headed by a man who has won national standing among educators, on the ground that the city could not afford it when its other needs and resources were considered. Probably only a good research could say which was right. In many places high schools have been established in units altogether too small or poverty stricken to support them, certainly on their present scale. What are the minimum resources, say in assessed valuation, for a district before it can reasonably expect to support a high school, in a given state? Only a thorough study can say. In some states the rural areas believe they are taxed to death for schools. In at least two states researches have shown that many of these complaining rural districts are wealthier than the cities which spend far more on schools. Traditionally the southern states believe themselves to be too poor to have adequate schools. Obviously they need less costly buildings, heating plants, indoor gymnasiums, and need to spend less for fuel, than do the northern states. But about 1909 a good research by a southern man showed that at least at that time southern states were not taxing themselves as heavily for

(4) At this writing a certain state department of education is in difficulty because no one last fall could estimate with sufficient accuracy to satisfy the state officials and legislature the state aid necessary for the minimum salary law during the next two years, a law fathered by the department.

(5) The advocates of junior colleges in one state recently stated that such colleges would reduce the expenditures for the state university while that institution stated flatly that this simply could not be possible.

schools in proportion to their wealth, as many northern states. (6) Is that true today for certain states or sections? Only research can answer correctly.

7. What are the possible and practical economies?

Undoubtedly an important reason for the present crisis in educational finance is the gap between the educational propagandists and the taxpayers. The propagandists usually take for granted that all present educational expenditures, especially for teachers' salaries, are giving all the returns that can be reasonably expected. The taxpayers believe strongly that considerable saving in present educational expenditures could be affected if educators endeavored to introduce reasonable economies—"the economies that any good business man naturally exercises in his business." So firmly do many taxpayers believe this that every person at all acquainted with school finance realizes that in many places adequate funds for public education are out of the question until the public is either assured of substantial economies in school expenditures, or convinced that further economies would injure the people more than the money saved would help them. The existence of this attitude on the part of the public is indicated by the eagerness with which it has lapped up the recently presented opinions of President Pritchett of the Carnegie Foundation.

Such a situation plainly indicates the pressing need for much investigation of various educational expenditures, bringing in the experience and findings of business concerns in similar conditions. Examples are easily found. An investigation now under way points to a substantial saving in text book costs by binding the text for each grade separately, so no idle pages will be bought. In many states the proper study would show the possibility of great saving in school supplies if standardization could be attained for a few kinds of pencils, papers, crayons and so on, and if cities would then club together in purchasing the standard articles. The government agencies greatly reduced the kinds of each article in many lines of goods during the war, with consequently cheaper production. State institutions are already buying coal and other supplies together in some states. Why could not cities do the same on their school supplies? No one today really knows whether eight years below the high school produce enough better results to be worth the cost over the seven year plan used in Kansas City and many southern cities. There may be decided economies possible in increasing the size of classes, requiring even better teachers at higher salaries and still spending less per child. Many school authorities feel that kindergarten leaders and laboratory teachers have been contending for classes so small that the public cannot reasonably be expected to finance them. Rooms may be used too little each day or week, especially in high schools and higher institutions, at the same time new buildings are demanded. At one state university, for example, where the faculty were asking for more buildings, one foresighted investigator showed that all classes could be comfortably cared for merely by scheduling classes earlier and later in the day. This was perhaps inconvenient for some of the faculty and students, but it was a highly strategic exhibition of economy to the legislature. At the same institution, the chemistry department devised a desk which doubled the capacity of a chemical laboratory for the same quality of work. In many states the duplication of work in higher institutions, rivalry between such institutions, the establishment of junior colleges, the multiplication of state educational boards and the like, are believed to be extravagant by many taxpayers. (7) In most states there are many small rural schools that could be closed and the work done much more cheaply and better by transportation to another school.

There is reason to expect that large saving in building costs would result from the proper research on eliminating useless corridor and attic spaces, lowering the heights of ceilings, taking ventilating flues out of partition walls, and so on.

Researches on the relative results secured by various expenditures are especially needed for they may point the way to great economies. The studies of classes of different sizes, previously mentioned, fall under this head as do also investigations of double laboratory periods, classes for subnormal and gifted children, and results as related to tax burdens.

8. How can adequate funds for education be raised?

In many places throughout the country much larger financial support is badly needed for the two distinct classes of school, public and other than public. Lest there be any misapprehension here, the writer states his conviction that the welfare of the country is vitally con-

(6) Rose, Wickliffe. School Funds in Ten Southern States, 1909.
(7) Koos has found much duplication of high school work in higher institutions.

nected with reducing the other than public schools to the smallest number necessary to do the experimental work in education and to provide a higher quality of schooling than can be accomplished in public schools in which all cooperate. But, since, no matter what the writer or any one else may think about the question, the other than public schools appear to be increasing in number, and, since their work is taken to satisfy compulsory education requirements, it is equally to the interest of the country that these schools have enough money to provide as good schooling as the public institutions. The ways of raising revenues for these two classes of schools are markedly different but doubtless research is equally needed in both fields. It certainly is badly needed for public schools.

Public educational institutions, in the last analysis, get increases in support by authorization from voters or from public officials who can be controlled by the votes of their constituents. Consequently those seeking increased support for public schools need to get down to business by finding out how to influence voters favorably. This seems obvious, but precious little is known about how to do it successfully. Take for example, such things as variations in the amount spent per child for schooling and in the tax burdens of various units for schools. For years schoolmen have known that on the compulsory elementary schooling, certain communities in the same state will spend fifteen or twenty times as much per child as other districts. For years they have known that some districts are eight or ten times as heavily taxed for such schools as other districts. The mimeographs and printing presses are constantly pouring out a stream of studies to show such facts. But we know next to nothing about how to present these facts so as to arouse the people to make educational opportunities and educational tax burdens more nearly equal.

In elementary and secondary school work beginnings have been made. Good researches on city reports have been made. (8) One on publicity campaigns for better support in cities has been available for two years. (9) One on newspaper publicity for schools has just appeared. (10) A start has been made on studying how to influence rural voters favorably for better school support. (11) But there is plenty of room for more extensive researches and those which will take up similar matters. We do not even know in many localities just who the people are who are against increased support for schools, much less why they are hostile, or how they can be won over. A man in one locality has the greatest difficulty in finding out how some other man has been successful in a similar situation. The facts ought to be known for many localities and they ought to be published. It is not safe to pass over this lightly by saying that the people of any locality know the facts about the opposition to school support, many of which facts can be discussed but not published. The increased school support will certainly not come so long as such cowardice exists. A man of national reputation in educational finance, whose work has made him familiar with the facts of school support in many states, says that the thing most needed at present is to secure school superintendents who are willing "to stand up and be counted" whenever school needs are discussed. But it is unreasonable to expect a great many superintendents to do this until they know more about how to stand up successfully. Researchers ought to show how they can carry it off. Who is behind the refusal to abandon the distribution of state aid on a school census basis which handicaps so many states? That ought to be made known for such states. The writer listened some months ago to the boast of a man who said he was employed by a corporation in a western state to study the tax situation and reduce the taxes of his corporation. This man said that in the first year he had effected enough reduction to pay all the expenses of his office, including his salary! The school people of that state need a research on who is opposing adequate revenues for schools. Gross misstatements regarding a certain proposal for federal aid to education have been recently circulated throughout the country. The country needs to know just who are behind such perversions of the truth. It would be easy to multiply such instances but these are sufficient to show the opportunities in this phase, although many of them will demand the highest ability and effort to get the facts.

In the field of higher education, the

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(8) Neale, M. G. School Reports as a Means of Securing Additional Support for Education in American Cities.

(9) Alexander, Carter and Theisen, W. W. Publicity Campaigns for Better School Support.

(10) Reynolds, R. G. Newspaper Publicity for the Schools.

(11) Alexander, Carter. Publicity Work for Better Rural School Support, Journal of Educational Research, VII, V-13, January, 1913.

most cursory examination reveals that certain state institutions appear to have practically no trouble in securing adequate funds while others in presumably about the same situations are often on starvation rations. For instance, there is an organization of about a dozen state universities which compile extensive statistical data on fiscal matters and exchange such data confidentially among themselves. Some of these universities are perfectly willing for all their statistics to be published to the world. Others are panic stricken at the proposal to do such a thing. A research which would get at the cause of this difference would probably be worth tens of millions of dollars in increased support to the state universities of the country. Again, one of the most difficult situations, theoretically, for a state university as regards increased support would be in a predominantly agricultural state that had a strong agricultural state college at another place, and only one other state teacher training institution but so strong that it had a nation wide reputation. Yet the state universiy in this particular state has secured the support of farmers as have few other state universities, has kept cordial relations with the other state institutions, and it has a school of education that is often ranked among the three or four best in the country. The country needs to know at as early a date as possible just how this was accomplished. In many states, the state higher institutions are periodically terrorized by bitter assaults from members of the legislature. In some states, these assaults are immediately stopped with little damage done; in others, they continue until the institutions are ham strung. Why the difference? It may be due to deliberate fostering and use of alumni organizations, to the careful study of the legislature, to all sorts of conventions which will bring people to the universities in the fortunate institutions. But whatever it is, the facts ought to be made known and published for the sake of the weaker universities.

That most educational institutions, other than public, of every grade need more money, is common knowledge. Researches as to how they can secure donations for current expenses and endowments are badly needed. There are certain rather widely known tricks of the trade, as for instance, that it is much easier to get a building than anything else, especially if it is named after the donor: that it is possible to conduct "drives" with paid experts; that various foundations will give one dollar for every three or four raised from other sources; that it is politic to cultivate the interest of wealthy persons in the hope of being remembered in their wills; that the 15 per cent exemption for donations from the income tax can be played up with wealthy persons, and so on. Doubtless too, there is much accurate knowledge on the subject that is carefully kept secret by the heads of the higher private institutions for they compete with each other for donations much more than do the public institutions which are more closely restricted to individual geographical areas. But a thorough research in the whole field, or several researches, would doubtless disclose many procedures which would bring in millions to private higher education and to the state institutions as well which are more and more receiving private benefactions. These researches also might help such public school superintendents as those in Arkansas, who must raise substantial sums from private subscriptions.

II. THE METHODS TO BE PURSUED

The needed researches in educational finance lie in such widely different fields and are of such a bewildering complexity, that it is out of the question to speak of solving many of them by any one or two specific methods. Of course, on many of the problems the truth of the situations is needed and, for this, scientific method is necessary—the painstaking hunting for facts, the laborious study of facts, and the equally painstaking forming and testing of hypotheses to explain the conclusions formed and how they came about. In this work there is no hard and fast division between the method of common sense and the higher scientific method. But it may be helpful to point out a few things that need emphasizing here.

Some school executives appear to think that with a course or so in statistical method they are equipped to revel in the statistics of educational finance until they solve many of its important problems. Obviusly statistical method will be a good thing for problems which so inevitably show plenty of statistical data as do financial problems of any kind. Certainly some of the necessary techniques will have to be worked out by men acquainted with the refinements of statistical method. But much of the work on financial statistics can have value only as the statistics are interpreted, or the causes of the results and changes described by statistical method are run down. Experimental method will hardly be permissible on many phases, for too much will be at stake to permit of experiments with communities and school

systems. However, much can be done by carefully describing conditions and methods of work. To put it another way, post-mortems can be held with the idea of preventing disease in other school systems. For such descriptive work and post-mortems, the "interviewing" method, developed by Charters in his studies of retail selling, promises much.

Furthermore, on certain problems, statistical method alone cannot secure the whole truth, or, at any rate, demonstrate it in a way to convince the public at large and thus secure that public's support. Take, for instance, the matter of fiscal independence of city boards of education. A brilliant statistical study of this, made for the Educational Finance Inquiry, gives clean-cut results. But in all probability it would be impossible to reach all the influential persons who ought to be informed on this problem by any presentation of such a statistical method, no matter how good. There are many persons of importance, perhaps even sections of the country, where the only way to convince people on this matter will be through historical method or a study of the legal aspects of the problem. Accordingly, there is need at once for one or more historical studies of fiscal independence and for at least one on the problem as set forth in legal decisions.

III. THE MEN TO MAKE THE NEEDED RESEARCHES IN EDUCATIONAL FINANCE

Valuable researches in this field are unlikely to be made by men who are merely hunting thesis or dissertation problems and want to work here because it has more than ordinary interest just now. They may be only babies reaching for the moon. But if a man has some special equipment for the work and will choose some phase of the educational finance field in accordance with that equipment, the chances for worth while research that will be duly noticed are promising. This special equipment may be any one of a large number of lines: Statistical method, economics, history, history of education, accounting, law, advertising, journalism, salesmanship, psychology, or a knowledge of practical politics. This last may provoke a smile at first thought. But, as a matter of fact, for achieving reforms in educational finance through public support, substantial help will come from adequate studies of how practical politicians of the best type achieve their ends, especially in securing good legislation. A man who likes to study this greatest of all games, practical politics, preferably one who has had enough experience in playing it and still has not let it master him, may contribute much of value. For such work, too, popular political articles like those of the SATURDAY EVENING POST or of COLLIER'S may be worth several times the pronouncements of closet psychologists and sociologists.

IV. THE GREATNESS OF THE OPPORTUNITIES

A properly equipped research man, who will turn his energies to the problems of educational finance, may be sure of two things. First, when he does a good piece of research in this field and effectively circulates the results, he is very likely to bring real help to schools. He may wish to help them, or he may imagine he is helping them, by researches in other fields. In educational finance, he will know it. Schools can do nothing without money. They can on many things do little worth while without considerable money. His researches may show them how to get more value for their money, why the schools should have more money, or how to induce the public to grant more money. In any one of these or similar ways, he is helping to breathe the very breath of life into the schools.

Second, if the school authorities of any area have asked the people for bread and received a stone, the school authorities should blame themselvs and not the people. To any one at all familiar with the facts, it is always a great wonder that the American people have so generously supported schools, often even denying themselves personally and skimping other civic needs. Accordingly, if the school authorities of any area complain of a lack of school funds, it is likely to be a case of "Physician, heal thyself." For this healing, sound research in educational finance is the surest remedy.

2. The Practical Schoolman and Experimental Work

Paul V. West, University of Wisconsin

Of the three ideals of Phi Delta Kappa, that of Research is most frequently overlooked. In reality, the best service and the most efficient leadership can be provided through research which will make education a more exact science and which will furnish valuable principles of method. Of the various types of research, none has contributed more largely to the development of the science of education than the experimental research carried on during the past two or three decades.

One who is in direct touch with a practical school situation has an excellent opportunity for worth while experimental studies. There will always be the need for those who are engaged in the pure research of the laboratory, and few, if any, schoolmen can hope to have facilities for refined experiments. But there are many problems which can be stduied most successfully in their natural educational setting. Among the school officers who are especially well situated for productive investigation are City, Town, and County Superintendents, and Assistant Superintendents, Directors of Measurements, Principals, Supervisors, Instructors, and Training School Directors.

An excellent opportunity for experimentation is offered by a school, more or less pliable and subject to control, with good equipment, available funds, and with a large personnel in the teaching force from which may be selected those who are able to give competent assistance.

All practical schoolmen have been carrying on experiments of one kind or another, but, in too many cases, scientific methods have not been employed and no objective records have been kept to establish the reliability of the results and conclusions. Teachers are engaged, methods of teaching used, textbooks of a particular type introduced, and certain types of school organization initiated, all as matters of experiment. It is a regrettable fact that, when such experiments are completed, the decision must be based largely on subjective opinion.

There is almost universal prejudice against experimentation in the public schools. It is believed that children are in the school to be taught in the most approved and effective manner and not to be the subjects of frequent experiments. Consequently the importance of carrying forward recognized practices is emphasized. Schoolmen feel that they are responsible to the public for every minute which the pupils spend in school. They frequently fail to realize that the best service which they can render their community, and education in general, is the development of the spirit of research in all schools under their supervision.

Even when willing to carry on experimental work, many schoolmen find themselves too busy to do so. There are three alternatives open, all of which will be favorable to research. One of these is to regard research as a very important part of one's responsibility and reserve a certain part of each day's program for it. Another is to assume responsibility for the general supervision of experimental work rather than to take personal charge and to enlist the aid of trained teachers to care for the details. In this way teachers are found who are very efficient cooperators in experimental work who would otherwise remain undiscovered. The third course is to cooperate with other research workers in carrying forward experimental work. An alumni chapter of Phi Delta Kappa may prove to be a remarkably progressive force in this connection.

There are many types of experiment whch can be carried on by men in the field. Some of them are suggested at this point: Administrative problems, such as methods of securing adequate school support, ways of dealing with the attendance, and types of school records; effective organization of the curriculum and the correlation of subjects; distribution of time in particular subjects and in the school program as a whole; analysis of the learning process and of study habits; comparative efficiency of specfiic teaching methods; use of standard school tests and mental tests and a consistent keeping of records; study of the relation between the results of mental tests and achievement tests; critique of tests, studies of the validity and reliability of content and procedure, notation of exceptions to results, comparisons of norms; classification of pupils; methods of classifying, permanent value of such classifications; case studies of pupils demanding remedial work, diagnoses of difficulties; tracing the progress of the children through the various grades and

ages; methods of establishing graphic profile records of progress; establishing norms of behavior in specific ability tests.

The reader of the reports of experimental work in our educational periodicals will find stimulating suggestions. Are the conclusions of this report valid? Would such and such changes in procedure be worth while? Care must be taken, of course, not to select a subject for experiment which must lead into blind alleys, or one which has already been satisfactorily treated. Care must also be taken not to advertise the experiment too widely until bona fide results are secured. Education needs men who will not dogmatically assert, "This test did not give satisfactory results, therefore I will discard the use of tests altogether," but who will say, "What is the reason for this inconsistency, and what can I do to render this instrument a more perfect measuring device?" Tests should rarely be given except in some kind of an experimental setting.

The practical school worker should make the advances in gaining the advice and active assistance of reliable educational experts in our colleges, instead of being, as is frequently the case, rather suspicious and unfriendly. He should, as early as possible, make sure that he has received adequate training in experimental technique so that he will be able to carry forward a reliable piece of work and to give it the proper statistical interpretation and comprehensive report. This training cannot be obtained by chance methods, or even by correspondence, but must result from practical experience under competent direction. It should include an acquaintance with laboratory procedure and a skill in using the essential methods of statistics as well as guidance in the construction of clear, concise, and well-ordered reports. Courses which are designed to meet this need are given in the educational departments of many universities and colleges.

The results of a successful experiment will be a sufficient reward. Schools and school boards, however, are coming to value more highly the men who are able to carry on scientific experimental work. The demand for such men is increasing, consequently advancement in the profession may be an added incentive for engaging in experimental work.

3. An Opportunity for Instructional Research

B. R. Buckingham

No matter how we may divide the field of research, it is obvious that, because of the paramount importance of the teacher-pupil situation, no branch of investigation is more worthy of attention than that which seeks to render that situation more meaningful. The field of research is as broad as education itself. Indeed it is not a field. It is a method, a point of view. If we divide it, we divide it upon the same basis that we divide education.

In education we recognize that all activities are subordinate to those which take place in the classroom. Here is the focus; and any measure which exalts the teaching act deserves our consideration without regard to whether it is based upon research or emanates from philosophical analysis.

Not long ago certain instruments of measurement came upon the scene. Those who derived them quickly came to believe that their work was educational research *par excellence.* Some of us have insisted that inquiries into educational finance, child accounting, curriculum construction, and, in fact, investigations of all the activities which condition the success of the school are entitled to recognition as educational research. So strongly do we feel that the making and using of tests is not necessarily research that we are inclined to question the propriety of that title unless certain conditions are fulfilled. Especially do we deprecate the idea that the giving of tests is research, or that an organization devoted exclusively to testing is a research bureau.

Now that the giving of tests has become a matter of routine, it is all the more evident that research must find its application in what takes place after the returns are in. Ten years ago giving, scoring, and tabulating tests could properly be called research. There was enough newness in it then so that the results could be regarded as "contributions." That time, however, has passed; and the mechanism by which both printed and mimeographed reports of distributions and medians are turned out works smoothly without a spark of the investigative spirit.

Indeed, it is the spirit of research which must save the situation. Too many superintendents, principals, and teachers rest content when papers have been scored, tied into neat bundles, and "filed." We frequntly find the filing

cabinet to be the bottom drawer of the teacher's desk. From this place we rescued some papers some time ago. From them we may illustrate what we conceive to be the opportunity for instructional research.

Here we have an eighth grade class. Three sets of test papers are available—a reading test, a problem test, and a test in arithmetic fundamentals. Our first procedure is to bring together the three tests for each child. It is clear that if we are going to utilize these materials for purposes of instruction, we cannot continue to organize our thinking in terms of tests. We must organize it in terms of children. It is what Tom did in all the tests he took; it is what light the reading test which Susan took throws upon the success she had in the problem test; and it is the bearing which Susan's abstract arithmetic paper also has upon the situation which we must take into account.

Having assembled the test papers so that all those for each child are brought together, we should next organize the material with reference to one test. This is like the independent and dependent variables in an equation or in a graph; or, again, it is like tabular arrangement of pairs of variables according to one of them.

Let us consider that these papers are arranged according to the size of score in the problem test. In other words, let us make the problem test the origin of our analysis. This means that we shall examine the problem test first and then see what bearing the performance on the other two tests has upon our findings in the problem test. Of course, it is the errors made on all of these tests which will give us the most helpful data. I may say parenthetically that this is directly contrary to the usual school procedure. The philosophy of the analysis of error does not appeal to the average teacher. Customarily we rate a child in terms of percents. If this has any meaning at all, it refers to the degree of success which he has attained. If the mark is high, we commend the pupil; and if other marks are high, we ultimately reward him with promotion. If the mark is low, the opposite procedure takes place. But the complement of the percent is never scrutinized. In other words, if a child obtains 75 percent, it is the 75 rather than the complementary 25 which engages our attention.

It will be instructive to consider one or two cases from the eighth grade class to which I have referred. Frances obtained the lowest score in the problem test. She got the first problem wrong. This problem sets up the following condition. A real estate dealer bought a house for a given sum and spent a stated amount for repairs. The selling price is given and the pupil is required to find the amount of gain. Frances added the cost of repairs to the original cost and obtained the correct sum. She then subtracted this sum from the selling price, thus showing that she had correctly sensed the situation and that her reasoning was not at fault. However, in subtracting she took 7 from 12 and obtained 4. This may have been due to defective association of the 12-5-7 combination, or to the fact that she borrowed 1 from the 12, although the conditions did not make borrowing the right procedure.

The next problem on which Frances failed was the following: "Seventy-eight percent of potatoes is water. How much water is there in a bushel of potatoes if a bushel of potatoes weighs 60 pounds?" Again the reasoning was correct. Frances multiplied 78 by 60. She obtained the wrong answer, however, because in multiplying 7 by 6, she got 43.

It is now time that we turn to Frances' test paper in abstract arithmetic. The test is the Monroe General Survey; and our readers will recall that the second sub-test is on multiplication. We find that each time Frances has occasion to multiply 7 by 6, she gets 43. This will serve in a very simple way to illustrate the manner in which the causes of error in one test paper may be ascertained by examining another test paper written by the same child.

Frances got the next problem wrong for an entirely different reason. In this problem two boys agree to mow a lawn for 90 cents. One works 4 hours and the other 1 hour. The pupil is required to distribute the money. She multiplies 90 cents by 4, and gives the boy who worked 4 hours $3.60. Then not to leave the other fellow penniless, she gives him 90 cents. Thus, she has entirely disregarded the fact that the boys agreed to do the entire job for 90 cents.

You will suspect that this is a reading difficulty, and attention to Frances' reading test confirms the impression. Whereas the typical eighth grade child should score 11 or 12 in comprehension, she scores only 5.

We are learning with ever-increasing certainty that the abilities of children are specialized to a remarkable degree. We may say that the trouble with Frances in the case of this problem, and indeed in the case of others to which we shall not refer, is a reading difficulty. If this difficulty is present with other

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Copy from chapters for publication should be edited by the chapter and sent by its corresponding secretary to the managing editor. Members in the field are invited to send communications direct to the managing editor.

A Bit of National Magazine History

The national magazine first appeared February, 1914, under the name of "Phi Delta Kappa Inter-Chapter News Letter." It was managed and financed by the writer. The national officers and the chapters were invited to co-operate.

The function of a national magazine was set forth in an editorial in the first issue:

"1. For communication from national officers to chapters and members of the field, and communications among chapters.

"2. For publication of the results of special research work in education. For example, Brother C. L. Phelps (of Stanford) article on 'A Study of Errors in Tests of Adding Ability.' Two or three such articles could be run in each number.

"3. For reporting items of general interest from the various chapters.

"4. And, finally, for maintaining among ourselves that unity of action necessary to make our organization of the greatest possible service to the cause of education."

The editor received enthusiastic response from the chapters with regard to the need for a national magazine, but nothing officially could be done until the meeting of the 1914 Council. The Council appointed a committee with Brother Ralph E. Carter as chairman to confer with the writer as to a definite plan, to be presented for action at the next Council meeting. The committee really had no authority to do anything more than to listen to any plans the writer had to propose.

We proposed to Brother Carter that we would go ahead and establish and publish the magazine at our own expense and solicit subscriptions among the membership of the Fraternity, provided the National Council would make it the official publication of the Fraternity. Brother Carter gave great encouragement to the plan and presented our proposition to the 1915 Council, which met at Oakland, California, in August. The Council unanimously accepted the proposition.

The name of the magazine was changed to "National News Letter of Phi Delta Kappa," and Volume I, No. 1, appeared in November, 1915, with no subscribers. Volume I, No. 2, appeared February, 1916, with only fourteen subscribers! When the Council met in July, 1916, at Chicago we had received 188 subscriptions and a lot of moral encouragement—also a net deficit of $217.27! However, meanwhile the chapters had become enthused over the idea of a national magazine and the 1916 Council was most emphatic in its support of the project. It voted to pay the deficit and to finance the magazine until the meeting of the next Council. Thus the magazine flourished until the War, when it suspended along with the other activities of the Fraternity.

The 1920 Council provided for a national membership fee of one dollar, payable in advance, the national magazine—known thereafter as "The Phi Delta Kappan"—to go only to those members whose national and local dues have been paid. That is the provision under which we are now working and which has made the national magazine self-supporting. The response during the current fiscal year has been so hearty that, as has been previoulsy announced, the Executive Committee has definitely decided to make the magazine a bi-monthly journal beginning July, 1923.

We have recently received numerous suggestions from members in the field to the effect that the national membership fee be increased to $2.00 or $2.50 in order that the magazine may be enlarged and that it may be made a monthly journal.

The Phi Delta Kappan is unique in several respects. It carries no advertising. Its columns are open to any member of the Fraternity. It pays for no contributions, yet it is receiving some of the best that are produced. Its policy is determinable from time to time by popular referendum vote of the members in good standing.

Let us keep it on the high plane to which we have elevated it and make it one of the outstanding educational publications of our country.

ABEL J. McALLISTER.

An Opportunity for Instructional Research

(Continued from page 11)

children in the class, we are likely to lengthen the reading period and subject Frances and her classmates to a more prolonged visitation of the customary oral reading fiasco. Even if we are teaching silent reading according to approved methods, we shall secure far less improvement in problem solving if we use any other reading material than arithmetic. It has been contended that there is no more reason why reading should be taught in connection with literature—meaning by "literature" *belles-lettres*—than there is reason for teaching it in connection with geography, arithmetic, or history.

It appears, therefore, that Frances needs instruction in the reading of arithmetic problems. The examination of the papers written by other members of her class shows that the need is general.

Reference has been made to Frances' absurd answer to the problem about the boys who agreed to cut a lawn. This failure to relate the result to the given conditions is a very common weakness. Frances herself exhibited it on more than one occasion. For example, on being required to determine under given conditions the speed of a railroad train, she came out with the astonishing conclusion that it was 720 miles per hour. Again, on being told that a certain health measure would reduce the deaths in summer by one-third and that the prevailing deaths were a certain number per thousand, she ascertained that the number of lives that might be saved in a city of one million people was 3,333,333.

The habit of examining an answer after it is obtained to see whether it squares with the conditions is an exceedingly valuable school habit to inculcate. Moreover, it is a habit which will not only tend to minimize classroom mistakes but will also, if it can be carried over into life, provide a safeguard against many errors of a more serious nature.

But our examination of the errors in this eighth grade class naturally did not stop with a single paper. Frances' classmate, Harriet, made the same score on the problem test that Frances did. Curiously enough she failed on the first problem, the one requiring the gain secured from the sale of a house, in precisely the same manner. She had the right method, but in subtracting she took seven from twelve and obtained four. One would hesitate to say that so trivial an error was prevalent in the class, but at least we can say that two pupils have the same trouble, an instability in the twelve-less-seven bond, or an inability to handle with certainty the process of "borrowing."

Harriet, however, did not have as much trouble as Frances did in reading her problems correctly; and her better comprehension score of 9 in reading accounted for her relative freedom from this sort of difficulty. She copied numbers wrong and made mistakes in computation. Her paper in the fundamental operations was therefore examined with interesting results. Some of these results had bearing on her errors in problem solving and others had entirely independent significance.

In the sub-test in addition—column addition of numbers of four digits—she tried ten examples but got only four of them right. Three of the six wrong answers were the result of failure to add the first column correctly. This is a timed test, and the pupils were presumably working rapidly. In moving rapidly from one example to the next, Harriet evidently overestimated the speed at which she could work accurately. After she had passed beyond the units column, she was not likely to make mistakes. The trouble then was that her attack was bad.

In division by numbers of two digits, Harriet made a pretty poor showing, and almost entirely for the same reason. She was unable to estimate accurately the number of times the divisor was contained in the portion of the dividend (or of the remainder) with which she was dealing. Moreover, if her first estimate was in error, she was quite unable to correct it. In other words, if she found that 79 *didn't* go into 362 five times, she quit without trying the effect of *four* as a partial quotient. In her estimate of these matters she paid no attention to the unit figure. For example, in using the divisor 79 she based her estimate solely on the 7, apparently being unacquainted with the fact that an estimate based on 8 would be more likely to be correct.

We are not calling attention specifically to the ways in which the various kinds of errors can be obviated. In many instances, however, the method is directly suggested by the nature of the error. In some instances all the pupil is likely to need is to have the error pointed out. For example, another pupil in this class, one whose work was in general excellent, made more mistakes in addition than in any other operation. Moreover, all his mistakes were due to one fact. He overlooked the top figure in the units column. Like Harriet, he attacked an

example too vigorously. Evidently he added downwards and quite disregarded the first figure in his path. Probably he could remedy this defect himself if it were merely pointed out to him.

In subtraction Harriet's only trouble was in borrowing, which probably explains her failure in the problem test to find the gain in selling a house.

Obviously, we cannot in the space at our disposal continue this analysis until the papers of the entire class have been passed in review. At the risk, however, of being tedious, we should like to consider one item on a third paper. Esther did especially poorly in abstract work in arithmetic. She was fairly accurate with integers, but slow; and her work with fractions was atrocious. She did not get a single example in addition or subtraction of fractions correct. She did not know the principle. Her rule for adding might be phrased this way: Add the numerators and multiply the denominators, cancelling if you can. The rule for subtraction was just the same except that you subtracted the numerators and it made no difference whether you subtracted the first from the second or the second from the first.

Esther also failed entirely in division of fractions because she did not "invert the divisor." Her inability to handle fractions caused her to fail on the problem test whenever fractions were involved.

We have used these papers merely to give point to our contention that instructional research is easily possible. All that is required is that the testing program be carried through to its logical conclusion. Time and again writers have insisted that unless the tests are used to improve instruction they are of little use. This statement wins general assent, but in practice the program is generally regarded complete when the test papers have been rated and perhaps tabulated for the use of the superintendent.

It is our contention that the real work —the real research work—begins at this point. We believe that every teacher, whether in university or elementary school, must teach and investigate. The opportunities for the latter were very few so far as the elementary school teacher was concerned until the advent of the testing instruments. Now, however, it is possible for the teacher in the grades to exhibit the spirit of research to a high degree. When she sits down with these test papers, realizing that each one of them presents a clinical picture, and proceeds to analyze them; when she compares the errors on one paper with those on another; when she groups pupils on the basis of common errors; and when finally she devises remedies to overcome the difficulties, varying them as her records prove them to be successful or the reverse—when she does this, she need yield to no one in her school system in the dignity of the type of research she is carrying on. Her work is no longer on the dead level of merely doing the next thing, imitating some former teacher, or following somebody's device. She has dignified her calling by invoking the spirit of research. Moreover, she is applying research at the point where it will do the most good—namely, in the classroom.

This is one of the big opportunities which we see for instructional research.

4. Promotion of Educational Research

A. G. Capps, School of Education, University of Missouri

Attention in educational research in the past has been concerned primarily with locating its problems, defining and refining its techniques, and drawing conclusions from its results. It has been demonstrated that scientific methods of procedure are applicable to the solution of a large proportion of the problems in the field of education. Further, a very creditable body of "criticised, systematized, and generalized knowledge" has been derived. Consequently, high-tensioned concentration on these aspects has laid the foundation of the science of education in the brief span of twenty years.

The foregoing activities may be characterized as individual and detailed. The research worker undertook to solve some problem of immediate interest to him. He gathered materials as best he could. Frequently his data were meager because he could not bear the expense entailed in collecting more. Consequently, he was confronted either with abandoning the project or with drawing conclusions from inadequate data. Further, if the individual worker went to the expense of collecting a large amount of representative data, he found himself buried in the details of tabulation and arrangement. These conditions forced him to undertake to a large extent those problems involving only the "minutiae of measurement."

However, the larger problems of research are now demanding attention. With these the individual worker cannot

hope to deal adequately. Educational research must become a cooperative enterprise. Many more people must attack the problems and pool their findings. Further, greater facilities for carrying on research must be provided if these larger and more fundamental problems are to be attacked. In order to attain these, definite attention must be given to the promotion of educational research in as systematic manner as business enterprises are legitimately promoted.

In view of the fact that the members of Phi Delta Kapa have solemnly pledged themselves both collectively and individually to research as one of their most important guiding principles of life, therefore, it is fitting and proper that they undertake the promotion of educational research. Some of the more important methods are the establishment of bureaus of educational research, the provision of greater facilities for graduate work in education, the adoption on a large scale of adequate uniform records and reports, and the popularization of research among the members of Phi Delta Kappa.

Bureaus of Educational Research. In order that the larger and more fundamental problems in the field of education may be attacked with promise of successful solution, bureaus of educational research must be established in a majority of the city school systems, in all the teacher training institutions, and in all the state departments of education. These bureaus will not establish themselves spontaneously. They will not be established by the initiative of the patrons of the educational institutions. Neither will they be established in sufficiently large numbers on the initiative of one or two interested individuals in the profession.

Therefore, since the members of Phi Delta Kappa have pledged themselves collectively to the ideal of research in education, they should make an organized attack on the project of establishing these bureaus. If the city in which they are working does not have a bureau of educational research, they should cooperatively carry on a campagn until one is established. Likewise, if the school of education in the state university does not have one, the members of Phi Delta Kappa in the state should cooperatively carry on a campaign until it is created. Further, after the bureau has been created the members of the Fraternity should make it prosper by their patronage and publicity.

Graduate Work in Education. Another powerful means of promoting educational research would be the development of more adequate facilities for graduate work in education in our great state universities. Here the advanced students of education who are and will become the leaders in developing the schools in the state should be given training in methods of investigation, and here should be solved the state's larger educational problems. However, unfortunately, the great majority of the schools of education in the state universities are little more than training schools for undergraduate students. Due to the large numbers of these students, the instructors must of necessity devote their energies in the main to them. Therefore, more instructors should be added in order that graduate work in education may be offered.

Further, it is absolutely essential to research in education that funds be set aside to provide specifically for clerical help and adequate equipment. It should be noted here that the bureau of educational research mentioned in the preceding paragraphs would go a long way towards providing these necessities. One should no more think of trying to do research work in education without the necessary means than would the members of the research departments of chemistry, physics, engineering, agriculture, etc.

The members of Phi Delta Kappa within a state may conduct a campaign to obtain greater facilities for graduate work in education in the state university. For example, the local chapter in the university may appoint a steering committee to put the publicity material together in a booklet. The material may consist of statements of the needs as seen by the dean of the school of education, the prominent educators in the state, and other pertinent material.

On proper presentation of this material the various organizations of teachers in the state will pass favorable resolutions. These resolutions along with letters of approval may be presented to the authorities having power to grant the request. Personal interviews may also play a very important rôle in the campaign. For these the steering committee should exercise great care in selecting resident and local members. In matters of detail the campaign must vary with the local conditions.

Adoption of Uniform Records and Reports. One of the greatest obstacles to research today is the inadequate and heterogeneous records kept in our schools. To this fact all will testify who have attempted to investigate to any ex-

tent, for example, problems in school finance or in child accounting. Without adequate uniform records and reports extending over a period of years the time and expense involving in gathering original material is next to prohibitive except for the larger bureaus of educational research. Further, even these bureaus cannot obtain many important data because past conditions usually cannot be reconstructed.

Therefore, the members of Phi Delta Kappa may render a great service to educational research by planning and adopting in their school systems adequate uniform records and reports. They should not stop with their own school systems, but should obtain the cooperation of a large number of others in the state. Further, the campaign should be carried into the state department of education for it is to approve and require the schools of the state to keep the desired set of records. If this were done, many of the larger educational problems of the state could be much more readily solved.

Popularization of Research by Phi Delta Kappans. We note with a great deal of pride that the greater proportion of research reported in the leading educational journals has been done by members of Phi Delta Kappa. However, in view of the fact that our membership has gone beyond the four thousand mark, it is rather disappointing to observe that only a small proportion of them seem to be engaged in productive research. In order to change this situation it will be necessary to promote educational research among our own ranks. One of the best means of accomplishing this purpose is to report our investigations in the PHI DELTA KAPPAN. Brief summaries of the investigations completed and those under way would be exceedingly valuable from this point of view. They stimulate research by setting examples and locating valuable data which may be used in various ways.

To be sure there are other organs reporting research, e. g., The Journal of Educational Research and the Yearbooks of the National Society for the Study of Education. However, if the research activities of our members were reported in the PHI DELTA KAPPAN, we would feel a greater personal warmth towards the projects and would be stimulated to undertake others on our own responsibility. The spur of friendly rivalry and common causes would tend to induce a much larger number of us to engage in research.

Added stimulation to research would be given if the local news letters contained reports of the investigations by the members of the chapter. Those in residence are no doubt engaged in research, but the members in the field are in danger of neglecting this phase of their solemn pledge. They have become submerged in the details of administration and classroom teaching and neglect research. However, the stimulus of knowing of the research work of their brothers would cause many of the field members to investigate some educational problem and report their findings to the local news letter and perhaps to the national PHI DELTA KAPPAN.

In conclusion, the foregoing suggestions grow out of the belief that the time has come to launch far-reaching campaigns to promote educational research somewhat after the fashion that the great American business enterprises are legitimately promoted. Further, it goes without saying, that the members of Phi Delta Kappa are the chosen ones to carry on these campaigns. And, finally, it is believed that, if the idea of promotion were carried out, soon would be ushered in a greater era of research and that education would be a science not only from the standpoint of method but also from that of a body of systematized knowledge.

5. Opportunities and Responsibilities in Educational Research

Walter S. Monroe, Professor of Education, University of Illinois

Until recently questions relating to methods of instruction, course of study, the organization and administration of schools, etc., were answered on the basis of opinion. When differences of opinion arose the question was debated and the side having the best debaters naturally won. Many of the opinions expressed were intelligent, frequently being the result of long experience and careful thinking. This procedure in dealing with the questions and difficulties encountered in the field of education was not satisfactory. Methods of teaching and other procedures which had the support of "public opinion" did not always prove

successful when applied in our schools. Not infrequently there was a dissenting minority which refused to accept the question as settled and demanded a rehearing. In order to escape from the uncertainty of this chaotic condition, it was proposed that the "scientific method" be applied to educational questions. According to this method "facts" were to form the basis of decisions in regard to educational procedure. The construction of education tests greatly extended the range of data which might be collected. In the endeavor to be "scientific" it has been proposed that all questions relating to educational procedure be answered by means of educational research.

During the last few years the "scientific method" has been applied to a great variety of educational questions. The questionnaire method has been used extensively. Many facts have been collected with reference to educational finance, child accounting, qualifications of teachers, and other items of educational procedure. The scores yielded by educational tests have furnshed the basis for the study of a variety of problems. The enormous production of educational tests is in itself an index of the emphasis which has been placed upon educational research. Statistical methods have been brought to the attention of superintendents and principals, and even of many teachers. Medians, averages, standard deviations, probable errors, coefficients of correlation, and other statistical terms have become a part of the educational vocabulary of a large number of persons.

In a movement which has experienced such a rapid development, it is not surprising that some workers have failed to develop a proper perspective and appear at times to have lost sight of the nature of educational research. There has been considerable confusion of statistical methods with educational research. The application of statistical procedures to a mass of data does not constitute research. A number of very important studies have been made in which the statistical methods employed do not extend beyond the simple arithmetic of calculating a few averages. Frequently, however, more elaborate calculations are required to analyze and summarize the data collected. In all cases the statistical methods employed should be looked upon simply as a means to an end. The derived measures which are obtained must be interpreted with due regard to their limitations. This interpretation is not a mechanical procedure. It is more than the mere application of a formula. One method of interpreting coefficients of correlation has been by comparing them with the probable error due to sampling. If a coefficient of correlation was greater than four or five times its probable error due to sampling, it was considered to be "high." By many persons this was understood to indicate a close agreement between the two sets of paired facts. However, we now find that such interpretation was frequently grossly misleading. Recently, it has been pointed out that a coefficent of correlation of .85 denotes a relationship between the two sets of data which is about one-half way between a guess and perfect correlation. It is highly important that those who use statistical methods be fully aware of the limitations of the data to which the methods are applied and of the significance of the derived facts which are used to summarize the original data.

In the above paragraphs it was pointed out that educational research does not necessarily involve intricate statistical procedures. It may be further observed that it does not necessarily involve the collection of a large amount of data. Much important research is being done in which the investigator secures a very limited amount of data but exercises great care in its collection. There is even need for research in which the investigator would collect practically no new data. For example, there is pressing need at this time for a formulation and critical evaluation of the procedures of educational research. We have had many educational tests constructed but it is only recently that there has been any attempt to formulate a comprehensive statement of the principles of educational measurement. Critical summaries of the contributions of research in various fields are conspicuously absent. There are many opportunities for research in which little apparatus or equipment beyond a pencil and pad of paper would be required. It may, however, be pointed out that this type of research is not easy. In fact, most of those who have attempted it have encountered difficulties much greater than in the more spectacular investigations in which large masses of data are collected and elaborate statistical procedures used. However, unless we are to experience an enormous waste some one must summarize, evaluate and digest for us the voluminous material which is constantly appearing in our educational periodicals, bulletins, monographs and textbooks.

No small part of the educational research is carried on by graduate students in education in our colleges and universities. Usually the immediate motive for their investigations is the meeting of the thesis requirements for their graduate

degree. In this way our graduate schools foster educational research and add greatly to the volume of work carried on, but the conditions imposed by them not infrequently place significant limitations upon the worker. The graduate student is naturally anxious to obtain his degree and consequently plans an investigation which can be completed within a limited time. This tends to exclude the more extensive investigations, particularly long-time experiments. Furthermore, the graduate student finds it necessary to secure results. Few faculties will accept as a thesis the account of an investigation which proves a failure, even though the student may have shown superior ability in discovering the limitations and flaws in his procedure and data. The examination of a considerable number of Doctor's theses suggests either that criticisms of the procedure used and limitations of data collected are greatly minimized or completely overlooked by the writers. Perhaps faculties are justified in refusing to accept as theses the accounts of investigations that have failed. This is not the place to debate the many questions involved but it is clear that we need to develop and maintain a critical attitude toward the data with which we work and the procedures that we use. In any new field a great amount of pioneering is required. Mistakes will be made; some procedures which appear satisfactory will be found upon trial to be faulty; failures must be expected. We may, however, profit from these failures if properly analyzed and reported, but the cause of educational research will be injured if critical "post-mortems" are discouraged.

A large number of our universities and colleges are now setting aside relatively large sums for the support of educational research. City-school systems and teachers' associations are also contributing to this work. Recently the National Education Association has organized a Research Department. A number of investigations are being financed wholly or in part by contributions from such foundations as the General Educational Board and the Commonwealth Fund. This expansion of educational research offers many opportunities but it imposes also certain responsibilities. In view of the motives which are likely to be involved, it is not inappropriate to raise the question whether we may expect scientific, objective and unbiased results. Those in immediate charge of investigations will naturally feel the responsibility of showing adequate returns for the confidence and support given to them. If they find their procedures faulty or their data inaccurate, will they have the courage to give appropriate emphasis to these limitations in their reports, or will they tend to camouflage the faults by voicing their opinions or by giving prominence to conclusions which they drew from their data without pointing out their limitations? There is urgent need for thorough and unprejudiced analyses of data and interpretations in which attention is called to the limitations of both data and procedures. Otherwise educational research will not profit by the mistakes which have been made. Other workers are likely to repeat them. More important, however, the general public will be misled in their beliefs concerning the achievements and the possibilities of educational research.

We have recently had an illustration of what is likely to happen more frequently unless research workers are more critical of their data and procedures. An investigator reported coefficients of correlation which he interpreted as being favorable to certain general intelligence tests. These coefficients of correlation have been used extensively in advertising the sale of these tests. Because such evidence bore the earmarks of being "scientific" it was found very effective in convincing prospective purchasers of the superiority of these tests. However, the author of a test published by another company which was shown by these figures to be distinctly less satisfactory has pointed out recently that the data upon which these coefficients of correlation were based were subject to certain limitations and therefore the interpretations were not justified. It is probably true that the publishing company who made use of these figures did so innocently, but somewhere a serious error was made. It appears that the original investigator was not duly conscious of the limitations of the data with which he was working. He did not observe sufficient care in interpreting his findings, and, either through ignorance or through lack of ability, he failed to evaluate his work correctly.

Educational research is attractive. It is a proposed method for arriving at "scientific" answers to a very wide range of educational questions. When questions arise concerning the value of a given procedure or concerning the relative value of several procedures, we are told it is necessary only to set up the appropriate experimental conditions and thereby determine "scientifically" the answer to the questions raised. Naturally, we desire to have such questions settled. It is irritating to have them unsettled or to feel that the answer which has been

given is subject to debate. As long as a question is unsettled we have to think about it. However, it is important that we be under no delusions concerning the assistance which we may reasonably expect from the application of scientific methods in the study of educational problems. There are many pitfalls which will be encountered. The data collected, even when unusual care has been exercised, are likely to involve errors sufficiently large to distort grossly one's findings. For example, in measuring the progress of a group of children it has been proposed that if a test is given at the beginning of the term and repeated at the end that the difference between the two average scores will constitute a measure of the progress of gain in achievement of the children concerned. However, when this procedure is followed relatively large constant errors are not infrequently introduced. In one investigation the repetition of a general intelligence test after a period of six months showed an average increase of several years in mental age for a certain group of children. For different groups of children in a school system widely different gains in mental age have been found. The explanation of these results is that in some way a constant error was introduced in one or both sets of the scores. Similar evidence of constant errors has been found in the scores yielded by achievement tests.

The presence of variable errors in scores yielded by educational tests has been generally recognized. When a test is repeated widely different scores are likely to be made by a considerable number of pupils to whom the test is given. However, it has generally been assumed that if we had a sufficiently large number of cases the effect of these variable errors upon averages, measures of variability, coefficients of correlation, and other derived measures would be reduced to a negligible minimum. Practically no attention has been paid to the possible presence of constant errors and their effect upon derived measures. Our textbooks on educational statistics have called attention only to the errors introduced by the use of a sample. We have been urged to express the coefficient of correlation with its probable error due to sampling. Little or nothing has been said concerning the error introduced into the coefficient of correlation by variable errors of measurement in the data from which it was computed. Furthermore, it is likely that a large number of those who have used the coefficient of correlation do not know whether the presence of constant errors in the data affects their results or not. This is not the time nor the place to enter into a consideration of the nature and effect of the errors encountered in educational research, but educational research cannot be said to be really scientific until those who are engaged in this work are familiar with this phase of statistical procedure.

In order to determine the best method of teaching, the relative value of textbooks, the relative merits of different plans of school organization, etc., it is proposed that controlled experimental conditions be established and the results measured. For example, the proposal has been made recently that the relative value of departmental organization in the upper grades as compared with the traditional plan of organization be determined by experimentation. In this proposal one school is to be organized on the departmental plan and in the other the traditional organization is to be maintained. The teachers of the two experimental groups are to be interchanged at the middle of the experimental period. Thus each teacher would give instruction under both types of school organization, functioning during one semester as a departmental teacher of one school subject, and during the second semester as a classroom teacher in the other, giving instruction in all of the subjects taught in that grade. In this way any differences in teaching ability would be neutralized. However, it is difficult to understand how a teacher could functon during one semester as a typical departmental teacher and during the next as a typical classroom teacher. It therefore appears that in this proposal one would not secure the typical conditions of departmental instruction if typical conditions of classroom instruction were to prevail. The reverse statement could also be made. Furthermore, the departmentalizing of instruction in the upper grades makes possible modifications in the course of study and in methods of instruction and equipment; in fact, these changes are prominent among the reasons urged for departmental organization. Consequently, "other things" cannot be equal and also typical in this experiment. Finally, under typical conditions it is likely that there will be differences in the objectives. In the typical departmental plan of organization the pupil is brought in contact with teachers who are "specialists" and with more elaborate equipment. From these he is expected to receive inspiration and to acquire a keener interest in his subjects. On the other hand he probably loses something because he does not come into

the close relationships with a single teacher as in the traditional plan of organization. These are but a few of the difficulties which will be encountered in this educational experiment. At the present we are not able to overcome many of these difficulties, and we cannot see how one could expect to secure a "scientific" answer to the question by following the proposed specifications for this investigation. It is likely that one who attempted this experiment would secure a more intimate understanding of the two plans of school organization, and thus be able to formulate a more intelligent opinion of the merits of each. However, unless the limitations just cited can be overcome, it is entirely out of place to expect a "scientific" solution of the problem. Similar statements can be made with reference to other proposed applications of educational research. This is particularly true of educational experimentation.

The educational research activities of the past ten or fifteen years have made notable contributions to our educational progress. In a great many fields a large volume of valuable information has been collected. In some phases of education we are approaching a scientific basis. The possibilities of educational research in the future are great. It deserves the opportunty and recognition which it is now receiving, but if we fail to recognize the limitations of our procedures and of our results, if we are influenced by selfish motives, if we fail to think clearly, educational research in the future will be distinctly handicapped. Those of us who are centering our efforts in this field should clearly recognize our opportunities and responsibilities.

Communications from National Officers

Activities of Local Chapters

During the last three months, I have had the pleasure of visiting four chapters of Phi Delta Kappa and have learned incidentally of the activities of other chapters. I am taking this opportunity to describe to the Fraternity as a whole three examples of unusually good work which is being done by local chapters.

The Michigan Chapter, under the vigorous leadership of President Purdom, has made its influence felt in a constructive way not only in the Department of Education but in the University as a whole. Three types of programs have been adopted which have proved of great value. First, the local chapter made arrangements early in the year to exchange speakers with different institutions. For example, arrangements were made to secure Dr. B. R. Buckingham of the Ohio State University for one meeting, Dr. V. A. C. Henmon of the University of Wisconsin for a second meeting, and Dr. Frank N. Freeman of the University of Chicago for a third meeting. Each of these men brought to the local chapter and to guests from other departments of the University, information concerning recent developments in the science of Education.

On other occasions, the program committee arranged for heads of departments to discuss with members of the Fraternity special problems in their respective fields. These meetings provided the members of the Fraternity with an unusual opportunity to learn of the problems of other fields of study. They also introduced members of different departments of the University to the students of Education and to some of the problems in which they are vitally interested. The third type of program included a series of dinners which were participated in by field members. On March 30, for example, a dinner was held which was attended by ninety local members, field members and guests. This was the largest dinner held by a local chapter which has been reported this year. The Michigan Chapter is to be congratulated on the unusually fine spirit which has been developed among its members and upon its adherence to the ideals of the Fraternity which are emphasized in every meeting.

Pennsylvania Chapter has organized a Research Committee for the purpose of making available to its members the collective experience of that chapter, of suggesting research projects, and of lending greater emphasis to the cardinal principles of research. This committee recently sent to the field members of Tau Chapter the following requests for information: (a) Suggest three topics for research that might be undertaken by active members of the Fraternity in connection with their work at the University. (b) What investigation have you begun with the idea that it will ultimately develop into a Master's or Doctor's thesis? (c) Give the full titles of research projects on which you are now engaged, independent of those required by university courses. (d) Do you know of any research projects that are being

carried on in your school or vicinity by people who are not members of Tau Chapter? (e) Name the subjects on which you have bibliographies that may be available for members of the Fraternity. (f) Give the titles of educational articles, papers or books written by you that you will agree to furnish, either in manuscript or in print, for the permanent files of the Fraternity. (g) Will you kindly make suggestions as to what practical purposes may be served by the Research Bureau of Tau Chapter. Pennsylvania Chapter through the co-operation of its field members has worked out a plan of co-operation which is both interesting and suggestive. Other local chapters can doubtless profit by this example.

The Chicago Chapter has given special attention this year to the improvement of its news letter which is now known as Zeta News. This bulletin is published quarterly by the local chapter under the direction of Paul M. Cook and K. N. Park. There are sixteen printed pages in each issue in addition to the cover pages. Each number contains items of interest in regard to the local chapter, the School of Education, the University as a whole, important educational events, biographies of new members, activities of field members and reports on one or more important educational problems. The Executive Committee of the National organization is most heartily in favor of the publication of news letters by local chapters. The form and content of Zeta News may prove very suggestive to other chapters which are planning to revise or modify their news letters.

WILLIAM S. GRAY,
National President.

Items of General Interest

1. Transfer of Membership. If a member wishes to transfer from one active chapter to another, he should obtain a transfer blank from his chapter secretary or from the national secretary. The blank contains full directions. Only members in good standing may be transferred. No transfer of membership can take place between May 10th and July 1st of each calendar year. (See National Constitution, Art VII, Sec. 3, Sub-Sec. D.)

2. Initiates. Chapters are prohibited from initiating members between May 10th and July 1st of each calendar year (see National Constitution, Art. VII, Sec. 3, Sub-Sec. D). Faculty members can be initiated only as honorary or associate members. After a faculty member has been initiated as an associate member, the chapter may elect him to active membership, if it so desires. A chapter cannot **elect** to honorary membership—it can only **nominate.** The National Council has sole authority to elect. The chapter secretary should write to the national secretary for honorary membership nomination blank.

3. The "Shingle." The 1915 Council provided for a **certificate of membership,** 6 by 9 inches. It is commonly called a "shingle." It is a beautiful design on white parchment suitable for framing. The National Secretary's office ran out of shingles about a year ago. The dies for the shingles were lost during the war and were received by the National Secretary **only just before going to press with this issue.** We will have shingles printed at once, and they will be shipped free of charge to all members initiated since September 1, 1915, who have not yet received them. Members initiated before September 1, 1915, may obtain the shingle by remitting 50 cents to the National Secretary.

4. Honor Key. The honor key is intended to "symbolize actual accomplishment in the solution of educational problems and shall serve as an encouragement and tangible reward by Phi Delta Kappa of continuous effort on the part of its individual members." The chapter nominates such members as it wishes to receive the honor key. The National Council must approve by a two-thirds vote. The local chapter must pay for the honor keys conferred on its members. There is no constitutional limitation as to the number of members of a chapter that may receive the honor key annually. The Executive Committee furnishes the recipient of honor key also with an honor key "shingle." No charge is made for the shingle.

5. Charters. The charter stone has been corrected and we have ordered and received a lot of charters for active and for alumni chapters. Charters will be filled in, signed by the national officers and shipped to the chapters as promptly as possible. We hope to have this work out of the way by June first. Chapter presidents are requested to notify the National Secretary if no charter has ever been received.

6. Chapter Seals. We have placed a wholesale order for manufacturing seals for each of the chapters that may not already be supplied. We hope to make shipment by the first of May. We have a list of the chapters that are without seals.

7. National Constitution (Pocket Edition). It has been very carefully edited and by the assistance of a committee from Epsilon Chapter, and the further help from Brother Melvin Croan of Kappa, a very complete digest has been prepared. This pocket edition is now on press and should be ready for shipment by May first. The price will be 50 cents, postpaid. Members initiated since July 1, 1922, will be supplied with a copy without charge.

ABEL J. McALLISTER,
National Secretary

Cleveland N. E. A. Luncheon

The annual luncheon of the Phi Delta Kappa Fraternity held during the meeting of the Department of Superintendence of the National Education Association took place at 12:15 p. m., Tuesday, February 27, 1923, in the Ball Room of the Hotel Winton, Cleveland, Ohio, Dr. Guy M. Whipple of the University of Michigan presiding as toastmaster.

The roll call of chapters by Brother C. H. Thurber (Tau) showed 348 members present.

Dr. J. J. Tigert, United States Commissioner of Education, was a guest of honor.

Dean Gray then reported the absence of Abel J. McAllister, National Secretary, on account of serious illness. Dean Gray complimented the assemblage upon their loyalty and good spirit in attending the luncheon. He then outlined the work of the six committees which were appointed by the Executive Committee and which were attempting to work out the details of the Fraternity's welfare. These committees are as follows:

1. Membership—Qualifications for.
2. Chapter Oranization—Qualifications of institutions wishing to establish chapters.
3. Constitution.
4. Ritual.
5. History.
6. News Letter.

Dean Gray then reviewed the membership drives that had been made during the twelfth, thirteenth and fourteenth fiscal years of the Fraternity, calling attention to the graphic representation of results obtained, which was supplied to each one present. As the membership for the fourteenth fiscal year had reached 2,000, the Executive Committee had decided to publish a forty-eight page magazine for the next issue, and beginning on July 1st to publish a bi-monthly. Dean Gray felt that the Fraternity was justified in doing this by estimating a membership of 2,500 for the fifteenth fiscal year. He also called attention to the point in the Constitution calling for the advance payment of dues. He also mentioned that the April number would contain a list of problems for research.

Dr. J. J. Tigert, United States Commissioner of Education greeted the Fraternity.

Dr. W. W. Charters of the University of Pittsburgh spoke on the need for the development of Personality. He made the point that personality completes the job—that information is one-third; personality two-thirds. He contends that training in personality development be made a matter for classroom assignment.

Brother H. O. Rugg (Beta) discoursed on "Nature Versus Nurture." He further deplored the generality of the addresses of the general sessions of the Department of Superintendence of the N. E. A. and pleaded for their being made more specific. (E. E. Lewis of Rockford would say "greater specificity.")

Dr. C. H. Judd of the University of Chicago outlined the opportunities possible for carrying on research under subventions from the Commonwealth Fund Foundation for Research.

The meeting adjourned at 1:45 p. m.

FREDERICK SCHULTZ (Zeta 312)

Comments

District Deputy Clayton R. Wise served as committee on local arrangements and is to be highly commended for the splendid way in which he co-operated in carrying out the plans of the Executive Committee.

Regarding plans for making the annual luncheon at the N. E. A. Department of Superintendence of larger service to our Fraternity, we have received a number of very practical suggestions that will be summarized and published in a later issue of THE PHI DELTA KAPPAN.

This year and also a year ago, approximately 10 per cent of the field membership of our Fraternity attended the luncheon. With our Fraternity growing as rapidly as it is and with our attendance at these luncheons gradually increasing, it behooves us to think deeply as to the use which we as a Fraternity can make of this annual gathering.

A. J. M.

Chapter News Letters

The National Secretary's office has received thirteen chapter news letters from ten different chapters since going to press with the February number. The following is a brief review of each.

GAMMA (Missouri). Vol. I, No. 2, February, 1923. Mimeographed. 8 pages.

CONTENTS.

Index Numbers for the County School Systems of Missouri.—Fred Bruner, Supt. of Schools, Bonne Terre.
The High School Boy and the Unspecialized Activities About the Home.—Wiley R. Boucher.
Kansas City Geometry Tests.—O. A. Wood, Central High School, Kansas City.
Directory, etc.

The officers of Gamma are undertaking to establish a closer relationship with the field members. These "Service Bulletins" undoubtedly will prove a valuable means to that end.

EPSILON (Iowa). Vol. III, No. 4, February, 1923. Mimeographed. 32 pages, with 8-page printed insert.

CONTENTS.

"Speed" Versus "Power" in Army Alpha.—G. H. Ruch and Wilhelmine Koerth.
Legal Status of the City Superintendent of Schools.—Don C. Rogers.
Status of High School Agriculture in Iowa Consolidated Schools.—C. L. Huffaker.
The Elementary School Curriculum in America Up to About 1800.—R. D. Russell.
News Notes. 9 pages.

The four research contributions to this number are of high class. Yet Epsilon, with her research contributions, never overlooks the news letter feature. No news letter contains more or better news notes. None approaches Epsilon in the character of the research feature.

ZETA (Chicago). Vol. VIII, No. 8, March 10, 1923. Printed. 16 pages and cover.

CONTENTS.

The Greatest Need in Education.—T. M. Carter.
A Letter From Our Faculty Sponsor.—William S. Gray.
University Has a New President.
Editorials.
Programs of Zeta Chapter for the Winter Quarter.
Pi Lambda Theta.
Notes of the Cleveland Convention.—Frederick S. Breed.
Statement of Treasurer.—Logan Anderson.
"Pedigrees" of New Members.
Alumni and Other News Notes.
Lost Members, Publications, etc.

This whole number consists of news, just the kind of news that every field member will read with interest. President Carter's editorial is of high order and has the Phi Delta Kappa ring.

EÂT (Minnesota). Vol. II, No. 2, March, 1923. Mimeographed. 14 pages.

CONTENTS.

Our Officers.
A Tentative Plan and Location for the College of Education, University High School and Elementary School and Elementary School of the Future (a one-page cut).
The Oklahoma Educational Survey.—Fletcher Harper Swift.
Recent Studies in Elementary Education.—Leo J. Brueckner.
What Phi Delta Kappans in the Field Can Do for Phi Delta Kappa.—Erich Selke.
Notes From the Field; Faculty Notes: Vital Statistics; Our President's Admonition; Notices by the Corresponding Secretary.

No chapter has had a more difficult after-the-war reconstruction problem to sovle than Eta. But her officers last year and this have worked with untiring energy, and the Eta News Letter gives convincing proof that the chapter is increasing in its virility. It is entitled to enthusiastic support from its field membership.

LAMBDA (California). Vol. IX, No. 3, February, 1923. Mimeographed. 5 pages.

CONTENTS.

Tolerance and Tests.—R. H. Franzen.
The Bureau of Educational Research.—C. E. Rugh.
Those National and Local Dues.—Ross Dewdney.
Items of Interest; News Letters From Other Chapters, etc.

A good news letter. One or two research contributions to each issue would improve it.

SIGMA (Ohio). February, 1923. Mimeographed. 9 pages.

It consists of a quite complete directory of the chapter membership. Such a number should be issued by each chapter once a year.

ALPHA-ALPHA (Oklahoma). March 6, 1923. Mimeographed. 5 pages.

It is issued in the form of a personal letter signed by the president, Ralph H. Records. It is full of interesting news and its general content indicates that Oklahoma Chapter is prospering.

ALUMNUS ALPHA (San Francisco). "News Letter San Francisco Chapter of Phi Delta Kappa." We have received three numbers.

CONTENTS.

January, 1923. Mimeographed. 2 pages. This one number is a little lean but, keeping in mind that Alumnus Alpha issues a news letter monthly, the January number is quite worth while.

February, 1923. Mimeographed. 7 pages. This number is full of news items of general interest to the members, containing many personals and news from the School of Education, University of California. The treasurer's report shows that the chapter is being well supported by its membership.

March, 1923. Mimeographed. 4 pages. Among the many interesting news items are two that will be of general interest. It announces Dr. Cubberley's forthcoming book, "The Principal and His School." The news letter also announces a joint initiation to be held by Lambda and Delta, April 7, when about twenty-five candidates will be received into membership.

ALUMNUS GAMMA (Kansas Alumni). April 3, 1923. Mimeographed. 4 pages. It contains a quite complete account of the last meeting of the chapter, at which ten or twelve members made brief reports regarding research projects on which they are working. Under the leadership of Deans Kelley and Kent, Kansas Alumni is working quite effectively as a research organization.

ALUMNUS EPSILON (Los Angeles). We have received two numbers. Vol. IV, No. 4, January, 1923. Printed. 12 pages.

CONTENTS.

February Meeting; Teachers' Institute Joint Banquet; January Meeting; A New National Educational Fraternity; A Scientific Medley; Exchanges.

The contribution, "A Scientific Medley," by Robert A. Cummins, reported only in part, consists of a description of several studies that have been made from time to time in connection with teaching. The report in full, we believe, would well be worthy of a place in **The Phi Delta Kappan.**

Vol. IV, No. 5, February, 1923. Printed. 12 pages.

CONTENTS.

Ladies' Auxiliary Organization; February Meeting; Mental Levels of Electrical Occupations, by G. Vernon Bennett; Pasadena Number; Changes in Membership.

The contribution by G. Vernon Bennett is especially good.

Correspondence Chapter for China

The February Phi Delta Kappan contained an account of the Correspondence Chapter for China. The National Secretary is in receipt of a very interesting report from its secretary, S. G. Brinkley, of Soochow University.

On January 21st, Brother Brinkley sent a circular letter to the other members of the chapter making certain announcements and asking for reports regarding the work in which the members are engaged and for suggestive problems that would be worthy of consideration by the group.

Secretary Brinkley forwarded to us the returns from his circular letter. Every letter is brimful of interest, but we can only give a brief summary of some of the suggested problems proposed, and a condensed report of the work in which the respective members are engaged. The following are some of the problems:

1. "The improvement of the teaching of Chinese (language) in the high school. In connection with this some tests should be worked out. Some already been tried."
2. "A brief pooling of experience in conducting teachers' meetings would be helpful. This might be done at the meeting in Shanghai in February."
3. "Just now my pet hobby seems to be 'English Tests,' a hobby that takes so much spare time that this communication becomes very fragmentary. Perhaps we need the stimulation of interchanging experiences and it is to be hoped that our first attempt will succeed."
4. "Get out objectively graded exams such that the examiner who prepares the papers does not have to do any reading or grading."
5. "We might do a service to Middle Schools over the country, by standardizing somewhat the number of hours spent on English in the different years, the results to be accomplished, issuing bulletins on methods in the different stages, and finally, having certain practical standard tests with which to check up on our work."
6. "What is the attitude of the men here in China toward the 'color line' in the National Constitution—should the home chapters admit a few thoroughly worthy Chinese and other foreign students of education who are to become leaders in Education in China and other foreign countries? Could not the case of the negro be dealt with entirely separately from that of the foreign students?"
7. "Could not members of Phi Delta Kappa in the various foreign countries serve as scouts in reporting to the National Organization or some other educational organization in the United States the status and needs of education in these foreign countries? We might serve as a medium for 'getting together' the 'educational needs and opportunities' of the foreign countries with the 'educational supplies and services' of the United States. We might serve in bringing in the desirables and in keeping out the others."

It will be of interest to the readers of the Phi Delta Kappan to know something of the professional work that the members of our China Chapter are doing:

S. C. Ferrior, Chinkiang, Ku. Principal of Chinkiang High School under the Southern Presbyterian Mission. We have an enrollment this term in the high school of 118, and in the high primary school of 70. We have twelve teachers besides myself. Our school has entirely outgrown its plant and we are now trying to raise money for more equipment.

Elam J. Anderson, Shanghi. Director of Schools, East China Mission, A. B. F. M. S.,

Shanghai College. It appears from his letter that he is also teaching English.

A. Archibald Bullock, Wuchang. Connected with Union Normal School. "Personally I have half a dozen things a-going, all of which have sprung out of real needs. A Composition Scale for measuring English products has been published and is in preliminary use; we have adopted Trabue's Completion Tests for use in Middle Schools and used it in several Educational Association's finals (just now 700 students are being graded by these two together with the Canton Christian College word-opposite test); we have under observation an intelligence test in Chinese for testing Middle School, or even college entrants and still another for the very lowest years of the elementary school to test children who know nothing of formal education, necessarily. Both of these tests are in preparation for the use of our schools, particularly those most carefully managed, to use in testing native ability as prerequisite for entrance."

N. H. Carman, Swatow. Swatow Academy. "It fell to me, after a period spent in partial language study, to open a Normal Department in our Academy. The question of Normal Schools, by the way, and the providing of properly trained teachers for missionary and other schools, seems to be quite a big question, at least down in this section of the country. My experience in this field is neither long enough or extensive enough, to qualify me for uttering words of great wisdom on the subject. We are trying to give a simple, practical course, in connection with our Junior High School, to train teachers for the Lower Primary Schools or the lower grades of the new six-year 'Citizen School.' Most of normal subjects are co-educational, the girls' High School on the same compound joining in with us. A total of nearly 25 students, taking about eight 40-minute periods a week of normal work, is our present status. The launching of a first-class model and Practice School is a project which we expect to complete before the opening of school next fall. The development of a Normal Group in our Senior High is something we hope to accomplish soon."

C. Hart Westbrook, Shanghai. "Teaching psychology and educational psychology at Shanghai College. Am trying to work out some adaptations of educational psychology experiments for Chinese students. Have given mental and educational tests in the Shanghai American School, and in the Baptist Mission Schools of Kaifeng, in co-operation with Dr. Elam J. Anderson, of Shanghai College. Dr. W. A. McCall has invited me to assist in his work by the construction of a Silent Reading Test in English for Chinese students."

Albert Anton Heinz, Peking. Tsing Hwa College. "My official job here at Tsing Hwa has been that of organizing and teaching mathematics courses from Arithmetic to the Calculus inclusive. As a student of Education and member of the faculty here I have necessarily been interested in all problems of curriculum formation, grading and test schemes, articulation with colleges in America, etc. Our chief problem here is that of the Junior College field."

J. N. Keys, Canton. Canton Christian College. "Since returning to China my position has been that of Assistant Professor in the Department of Education. In this department, newly organized last year, I am working with Mr. H. B. Graybill, Professor of Education, and Mr. Yeung Kwok Tsuen, instructor, an M. A. of Leland Stanford under Terman. My only venture to date has been in the field of English Mastery tests, where I published last March the two first of these, the parallel Vocabulary-Opposites tests."

Sterling G. Brinkley, Soochow, Ku. "Since my return to China in the fall of 1921, I have been located at Soochow University, in the Department of Education. I am the only teacher in that department and I have only a few students. I am giving part of my time to middle school English. Last year I began experimenting with the Thorndike-McCall Reading Test. During the summer I made a study of this test as a measure of English ability in comparison with Keys' Opposites Test and Bullock's adaptation of the Trabue Completion Test, based on data secured during the year. I have submitted an article to the Educational Review (C. C. E. A.) covering this study. Professor McCall was kind enough to go carefully over my work with me and at his suggestion I am now at work attempting to adapt the Thorndike-McCall Reading Test. Keys has suggested that we make this reading test the reading test of his series, and we are working with that end in view. I have many personal problems connected with the attempt to build up the department of Education here."

Members of the Fraternity wishing to co-operate with the Correspondence Chapter for China should address its secretary, S. G. Brinkley, Soochow University, Soochow, China.

Personals

Agnew, Walter D. (Beta 326), Montgomery, Alabama—This is an A grade Woman's College under the classification of the Southern Associatoin of Colleges and Secondary Schools. About seventy-five of our Seniors enter the high schools of Alabama and other states as teachers each year. We have an enrollment of over 400 of the choicest young women in the South. The Department of Education is doing a high grade of teacher training work with practice teaching in one of the Montgomery County Consolidated Schools. This county system has a great reputation throughout the United States for its remarkably efficient organization.

Bader, Newton C. (Delta 169), Olympia, Washington—I have been engaged up until the present time as Boys' Work Director for the Y. M. C. A., but am resigning from my present position after March 1, 1923, to take up insurance work,

as agency director for Southwest Washington.

Brace, David K. (Beta 460), Portland, Oregon—I have decided not to return to China, for the present at least, and will probably be connected with the Department of Physical Education again next year, at the same time finishing my dissertation.

Bracken, John L. (Zeta 282), Duluth, Minnesota—Am editing the Second Yearbook of the Department of Elementary School Principals of the N. E. A. This volume will represent the work of representative elementary school principals from all parts of the country. Judging from the articles at hand, there is a conspiracy afoot to make the Second Yearbook a definite contribution to the literature of after-testing work. The book will appear in May.

Bratton, Sam T. (Gamma 118), University of Missouri, Columbia, Missouri—During the coming summer I shall teach geography at Cornell University, Ithaca, New York. Three courses will be given: Geographic Influences in American History, Cartography, and the Teaching of Geography in Elementary Schools. Secretary and director of the Geography section of the Missouri State Teachers' Association. This section has undertaken the problems of "Curriculum Construction in Geography."

Brown, Joseph C. (Beta 50), St. Cloud, Minnesota—I was a member of the faculty of the College of Education of the University of Illinois and resigned there in 1916 to accept the presidency of the St. Cloud State Teachers College. I have been in this position since July, 1916.

Callihan, Tressler W. (Zeta 231)—Left school in June, 1922. Now connected with John Hancock Mutual Life Insurance Company, Galesbury, Illinois. Official position, Special Representative. Territory, seven counties.

Carmichael, Omer (Beta 392), Supt. of Schools, Selma, Alabama—During the last twelve months the people of our community have voted on themselves taxes to the amount of five mills for schools. Of this about half will be devoted to buildings and grounds and about half to maintenance and operation.

Carroll, R. P. (Beta 324), Emory and Henry College, Emory, Virginia—I taught in the summer school at the College of William and Mary last summer and returned to teach at my Alma Mater after an absence of eight years. I shall teach here during the summer school this summer. Finished my residential work in Columbia last spring. Am continuing work on my dissertation.

Chiles, Ira N. (Gamma 154), Central Wesleyan College, Warrentown, Missouri—I completed requirements for degree of Master of Arts in the University of Missouri, summer of 1922. Title of thesis, "Certification of Teachers in Missouri." The plan for certificating teachers outlined therein was adopted by the Missouri College Union and served in a large measure as the basis of a plan adopted by the Missouri State Teachers' Association.

Chittendon, Merritt D. (Beta 347), State Supervisor of High Schools, Burlington, Vermont—At the present time I am preparin a state course of study for high schools. It will appear in twelve bulletins. Six are already issued.

Clarke, William F. (Zeta 33)—Director of Training School, State Teachers College, Duluth Minnesota. I am spending my second year here. I have charge of the Training School, which includes the task of placing cadets in city schools for practice purposes and supervising their work. Mr. S. W. Case, a Phi Delta Kappan, is on the faculty also. There are about a dozen members of Phi Delta Kappa in and around Duluth. We had a meeting in Duluth some months ago.

Collier, Price L. (Gamma 137), Supt. of Schools, Richmond, Missouri—Education tests are being given in all the school subjects and the course of study is being written in the light of the facts discovered. Teachers, principals and superintendents are co-operating in the construction of a new course of study. The administration of the High School is being supplemented by two loyalty leagues, one composed of boys and one of girls. The latter organizations were organized by the students on their own initiative.

Critchett, Francis E. (Eta 8), New Prague, Minnesota—I have been superintendent of schools at New Prague for eight years and have just been re-elected for a ninth year. We are putting up a new $120,000 high school building.

Custer, Cecil C. (Kappa 151), Director of Physical Education, Augusta, Kansas—I am having a glorious winter. Football season closed very successfully. Basketball not very promising. Have 1,300 individuals in physical training, ranging from the kindergarten to seniors in high school. Augusta is fortunate in having one of the most efficient school men in the state as a superintendent, and as a result the senior high is now located in

a very modern, up-to-date plant, with a splendid gymnasium.

Dakan, Carl S. (Gamma 6), Assistant Vice President, Ladd & Tilton Bank, Portland, Oregon—At the time I became a member of Phi Delta Kappa the chapter at the University of Missouri was known as Nu Row Beta. At that time I was secretary to A. Ross Hill, the President of the University, and was doing undergraduate work in education and substituting for Dr. Hill in his class room work. After graduation I came west to Seattle, Washington, where I taught ten years in the High School and at the University of Washington. At the University of Washington I became interested in money and banking, which subject I taught two years. I supplemented my class-room work with work in the Seattle National Bank and the Seattle Branch of the Federal Reserve Bank. From there I came to Ladd and Tilton Bank as head of the Credit Department.

Dalton, Sidney P. (Gamma 88), Member of firm Spalding & Dalton, Attorneys, Cape Girardeau, Missouri—I have strayed away from the teaching profession, but I have not lost interest in the matters in which teachers are interested.

Davis, Everett (Zeta 346), Student, University of Chicago—Thesis subject: Analysis of the Daily Programs of Fifty-one High Schools. I expect to take the M. A. degree in June, 1923.

Diefendorf, John W. (Gamma 194), Columbia, Missouri—I am teaching methods in Stephens College and writing a thesis on age-grade and grade-progress conditions in certain Missouri school systems. A feature of this work will be the correlation of intelligence rating with grade and progress statistics.

Diemer, George W. (Gamma 90), Kansas City, Missouri—I am now principal of Kansas City's finest elementary school. The buildings and grounds represent an outlay of $500,000. Special features of the building include two large gymnasiums, a roof playground, open air porch and rooms, large auditorium with spacious stage, kindergarten play porch, etc. We are this year experimenting with the Platoon plan. Special features which we are emphasizing are the Practical Citizenship carried on through the auditorium classes, the library work, music, art, corrective gymnastics, gymnasium and playground. One-half the school day is devoted to reading, arithmetic, language, writing and spelling in the Home Rooms.

Dodson, Charles W. (Alpha 17), Mobile, Alabama—I have not kicked up much dust in my time. Left school work in 1904, came to Mobile and entered the Real Estate field and have been here ever since. I have not lost interest in affairs of Education. Am now Chairman for Alabama in the Memorial Building fund for Indiana University.

Epperson, Charles A. (Gamma 43), Prof. of Math., N. E. Mo. State Teachers College, Kirksville, Missouri—Have been on my present location since 1915 except for eighteen months' army service. Was captain in Coast Artillery and saw six months' overseas service.

Friley, Charles E. (Beta 400), A. & M. College of Texas, College Station, Texas—Carrying on a study in the Segregation of Engineering Students of Superior Ability.

Fuller, Wayne R. (Gamma 122), Buffalo, New York—I was made manager of industrial sales of Pratt & Lambert, Inc., the first of this year, having been assistant manaer previously. My friends could be no more surprised than I am at having drifted so far from the fold. But my interest in Phi Delta Kappa is fully maintained and the Service Bulletin of Gamma Chapter is about the most prized publication I receive.

Giddings, Levi A. (Epsilon 61)—Since the fall of 1915 I have been teaching in the biology department of East High, Salt Lake, Utah. I have attended one summer session of the University here. For the last four years I have spent the summer working for the government, working on the survey work in connection with the sugar beet nematode. The last two summers I have worked in northern Colorado and expect to go there again this summer about the middle of June.

Gildersleeve, Glenn (Beta 393), Washington Junior High School, Rochester, New York—The routine into which I am thrust is so exacting that I am doing that and nothing else. After another year I hope to find a position in which I will have time and opportunity for original experimentation, which is next to impossible in the present situation. So many musical educators lack the vision of anything beyond "Doh Re Me" that I often become a trifle discouraged as I compare them with the type of men in Phi Delta Kappa. But the worm's eye outlook can be found in other lines as well, I presume. Routine training has its value and at present it is that I am learning.

Gold, Hugo H. (Epsilon 138), Graceland College, Lamoni, Iowa—I have regis-

tered and attended last summer session at the University of Chicago, and shall be in attendance this summer, taking work in Educatoin for the Ph.D. degree. I have recently made a survey of the schools of Decatur County, Iowa, and the results will probably be published soon.

Gould, Harry H. (Epsilon 116), Oak Park, Illinois—During my graduate work on my masters thesis, which was in the field of the Psychology of Advertising, I got interested in advertising to the extent that I left the field of education for a place in the commercial field. For the first five and a half years of my commercial career I was associated with the Mitchell Faust Advertising Agency as Vice President and Director of Commercial Research. For the past two years have been doing similar work for the Chicago Tribune.

Greene, Paul C. (Zeta 294), Madison, Wisconsin—I have been attending meetings of the University of Wisconsin Chapter. I have found them to be a bunch of live wires. The speakers they have secured for these meetings have been unusually good.

Harrington, Ertle L. (Gamma 31), Saskatoon, Saskatchewan, Canada—Professor of Physics in University of Saskatchewan. Am enjoying my work here very much. We have a new $400,000 physics building, admirably suited to our class and research work. The equipment is new and the faculty most congenial. We have just built a home on a most beautiful spot on the bank of the Saskatchewan River, overlooking the city. Our long summer vacations add much to the enjoyment and opportunities of the position here.

Harvey, Fred E. (Epsilon 143), Colorado Springs, Colorado—I expect to teach Latin in the State Teachers' College at Greeley, Colorado, during the coming summer session. Some of my colleagues here belong to a fraternity of Education called Kappa Delta Phi. What relation does it bear to our Fraternity?

Heck, Arch O. (Beta 313)—This is my third year at Akron, Ohio, as Director of Research, since leaving Columbia the spring of 1920. We have emphasized the use of standardized tests in the work of supervision in the grade schools. We are testing in Arithmetic, Reading and Spelling—at present—at the beginning and close of each semester. Our system calls for what we call individual record cards for each child in each subject. Each child thus has a card containing all his scores made in a given subject from semester to semester. In reading we are using for the first time the Thorndike-McCall reading scale. Progress of classes can thus be determined each semester.

Heim, Raymond W. (Beta 395), Newark, Delaware—In order to keep overhead expenses down as low as possible, Delaware has combined the two offices of State Director for Vocational Education and Professor of Agricultural Education into one position. I am assuming this dual capacity with headquarters at the University of Delaware. During the past four years Vocational Education in Trades and Industry—Home Economics and Agriculture together with teacher training in each of the three lines has gained substantial headway.

Holy, Thomas C. (Epsilon 254), Iowa City, Iowa—I am working this year with Dean W. F. Russell on a study of Iowa school costs. This survey is being financed by the Educational Finance Inquiry, of which G. D. Strayer is Chairman. Similar surveys are being, or have been conducted in New York, Illinois and California.

Hoskinson, Jesse H. (Alpha 6), Supt. of Schools, Whiting, Indiana—Making $550,000 worth of improvement in school plant this year. Junior High School building, $425,000; grade building, $65,000; new heating plant, $60,000. All nearing completion.

Hunkins, Ralph V. (Zeta 281)—Co-author with Dr. Breed of University of Chicago of article in February number of Elementary School Journal, entitled "The Validity of Arithmetical-Reading Tests." We believe this is an important article because it is a step in the necessary task of evaluating the multitudinous tests that now exist.

Hutchings, R. R. (Alpha 264, Delta 189), Principal Franklin School, Santa Barbara, California—I came to Santa Barbara last August. Since then I have been busy helping vote $200,000 for a new building and being chairman of a committee of principals to adopt a foolproof rating scheme for taxes.

Jessup, John H. (Epsilon 246), Supt. of Schools, Glenwood, Iowa—I intend to get my Master's degree at the State University of Iowa as soon as I an accomplish it : I have my thesis yet to write. Brother Lloyd Spencer and I are trying to make educational history here in Glenwood.

Johnson, Oscar J. (Eta 152), St. Paul, Minnesota—My work is in the field of intelligence tests and the classification of

school children on the basis of mental ability. We are pushing the research program into a number of lines, one of which is in more adequately caring for bright pupils. This we do in three ways: (1) Special classes wherever possible; (2) acceleration and enrichment combined for pupils who cannot be put in special classes; (3) summer school classes for bright pupils. We find that these methods are satisfactory at present and meet with general approval.

Johnson, Roy I. (Gamma 13), Stevens College, Columbia, Missouri—Am on leave of absence this year studying in the University of Chicago.

Kenagy, Herbert G. (Gamma 120), Carnegie Institute, Pittsburgh, Pennsylvania —Busy at present helping the American Radiator Company and Proctor and Gamble Company build real training courses for their salesmen and district managers. Work is based on thorough job analysis.

Kirk, George W. (Gamma 14), St. Louis, Missouri—Am having a wonderful experience with the Rehabilitation Division of the U. S. Veteran's Bureau, District No. 9. Have been in this work for four years. Being a government proposition, naturally we expect a certain number of investigations, also some unfair and distorted charges. However, we are glad to state that we welcome an investigation of conditions in District No. 9, for we have nothing to fear from investigations. In other words, we feel that our District is efficiently managed, and that we have made all the progress possible in the rehabilitation of disabled soldiers. We have approximately 8,000 men in training. We have trained a total of approximately 12,000 men in this area, including the states of Missouri, Iowa, Kansas and Nebraska. We have men learning some three hundred different occupations. The training lasts from one to four years in length. We are using 150 standard schools in our four states for our institutional training.

Kirk, H. H. (Beta 396), Superintendent of Schools, Jamestown, North Dakota—Elected president of the Association of North Dakota City Superintendents November 20, 1922.

Leach, John A. (Gamma 182)—At present (1923) I am doing work in the University of Missouri leading to M. A. degree.

Lee, Curtis F. (Zeta 207)—I am just closing up my first year's work as eastern manager of the McConnell School Map Company, Chicago, Illinois. I have had a very successful year and recently signed up for another year at an increased salary. A new edition edited by Dr. Tryon of the University of Chicago is just coming from the press. The prospects for a large year's business in the East are very bright.

Leech, Bert S. (Zeta 340), University of Chicago—Am interested in the trend of modern science teaching especially in Botany. It is for this reason that I am attempting to work out a history of Botany instruction in the secondary schools as a Master's Thesis. If possible I want to offer some evidence on the probable future of Botany instruction in the secondary schools.

Lehman, Harvey C. (Zeta 121), Junior College, Hibbing, Minnesota—I expect to be in residence at the University of Chicago during the entire summer.

Loomis, Burt W. (Gamma 47), State Teachers College, Maryville, Missouri—Have just published a "Survey of Gentry County Public Schools."

MacDonald, David J. (Epsilon 37)—Now in charge of training of Smith-Hughes teachers in two-thirds of state with headquarters at Ohio State University. Curricula for training commercial teachers now developing under my direction. Present plans are to take care of training of following types of teachers in this department:

(a) Commercial Teachers:
1. Retail selling.
2. Bookkeeping.
3. Stenography and typewriting.

(b) Continuation School Teachers (part-time):
1. Trade.
2. General continuation or related.

(c) Trade or Shopteachers.

McElhannon, J. C. (Zeta 318)—I have just been elected as head of the Department of Educatoin in Baylor College, Belton, Texas. There are five teachers in the department preparing girls to teach the Elementary School grades principally.

McKeown, B. M. (Zeta 307), Knox City, Texas—Taught Education in Simmons College, Abilene, Texas, during the summer of 1922 and am at present located as superintendent of the schools in a small town system in western Texas. Making very satisfactory progress. Recently got some legislation through that will enable us to enlarge our district and thus strengthen our system. I shall probably teach at Simmons College again this summer.

Masser, Daniel V. (Epsilon 131), Superintendent of Schools, Fonda, Iowa—Over 50 per cent of the students enrolled in the Fonda High School are tuition pupils. Fonda is known as one of the smaller systems of schools that get results. Fonda has won the state championship in debate twice, the state extemporaneous speaking contests once. Fonda holds one of the largest track meets in the state. Last year 28 schools and 245 athletes took part. I have personal charge of this meet. During the summers I act as assistant professor in Education at Morningside College. I have held this position for the last six years. Will have the same position this summer.

Mead, Cyrus D. (Beta 41), Berkeley, California—I shall give summer work this summer in Brigham Young University at Provo, Utah.

Monroe, Mack P. (Alpha 205), Detroit, Michigan—I will teach three courses on the Junior High School in Wittenberg College, Springfield, Ohio, this next summer.

Morris, A. F. (Gamma 149), La Grange, Missouri—I have just commenced the work of teaching education in La Grange Junior College. I have enrolled in the department now twenty-eight students. My work is largely that of training for elementary and rural work.

Morrow, William C. (Kappa 70), Superintendent of Schools, Elk City, Kansas—This is my second year in this position. I have a good, co-operative bunch of teachers and the work is going fine. This is the most congenial community in which I have taught since leaving the University in 1916.

Neel, F. G. (Alpha 259), Superintendent Pulaski County Schools, Winamac, Indiana—We are using the Extension Division of Indiana University in Extension Class work in connection with our Teachers' Institute work. Eighty teachers taking the work for credit.

Nuckols, H. H. (Zeta 330), Principal High School, St. Charles, Missouri—We are building a new $200,000 high school building which will be ready for occupancy October , 1923. It will be large enough to take care of 600 students. Our enrollment in the high school has increased more than 40 per cent the last two years. We are getting more students from the parochial schools. It has been hard to interest many of the patrons in the high school but we feel that we are meeting with considerable success. I will be in school at the University of Chicago again this summer. I am planning on being here the coming year.

Perham, P. D. B. (Delta 64), Salt Lake City, Utah—Going to Columbia next fall for my Ph.D.

Parke, K. N. (Zeta 322), University of Chicago—Busy on "Zeta News."

Petterson, Gustav S. (Eta 20), State Normal, Mankato, Minnesota—Our main building was destroyed by fire on February 5, 1922. I lost all my professional material, $5,000 in books, $1,500 in pamphlets, $800 or more in charts and lantern slides, and worst of all, all my doctor's dissertation materials. Minnesota, Eta Chapter, very generously donted $25.00 for the library which was put into books on Educational Sociology. It was a substantial help at that time. Next September I will move into a new classroom and office. The new main building is now rapidly rising.

Pierce, Leo F. (Delta 196), Palo Alto, California—I will finish my research in time to receive the doctorate in all probability in the coming June. My problem is one in Physical Chemistry and will have a pertinent effect indirectly on education. It is designed to be a contribution to the ease and convenience of radio communication.

Pittman, M. S. (Beta 264), Director Rural Education, State Normal College, Ypsilanti, Michigan— I am to be on leave from the Normal College during the summer and shall teach in the School of Education in the University of Michigan.

Pryor, Hugh C. (Beta 280), Dean of Education, State Teachers College, Aberdeen, South Dakota—I am developing a series of graded exercises in student teaching. This year I am trying to prepare an outline in connection with each exercise as a guide to the student teacher in observation and practice. This material may be submitted as a Ph.D. dissertation.

Puckett, R. C. (Beta 462), Springfield, Ohio—Expect to teach in the summer session of the State University of South Dakota.

Pummill, J. G. (Gamma 166)—I closed my term as state high school inspector (with the expiration of the term of state superintendent of schools, Sam A. Baker), on January 8, 1923. I am at present a candidate for county superintendent of schools of Newton County, Missouri. I have three opponents. My chances of election are excellent.

Quinn, James J. (Iota), Superintendent of Schools, Turners Falls, Massachusetts —Also President of the Rotary Club.

Rakestram, Norris W. (Delta 98), Stanford University, California—Am leaving California this June for a year and a half in eastern United States and in Europe.

Randel, Victor (Gamma 152), Head Department Industrial Arts, Normal College, Huntsville, Texas—This is oldest Normal College in Texas, and is the only state teachers college in the United States which receives full federal approval and aid for the training of agriculture teachers. There are five Phi Delta Kappa men on the faculty here.

Ray, William H. (Epsilon 39), Superintendent of Schools, Tipton, Iowa—Have recently been re-elected to my present position for the fifth time. Expect to have a vote on a new school building this spring.

Reinoehl, Charles M. (Alpha 23), Fayetteville, Arkansas—In addition to courses in supervision and administration I am offering at the University for Prospective Superintendents, Principals and Supervisors, I have done considerable work among the county superintendents of Arkansas through the extension service in rural school supervision and in county school administration. I find here a fertile pioneer field, the county superintendency law being only two years in operation in this state. Next year I hope to do considerable work in acquainting principals of consolidated schools, of villages, and of towns with their work and help them to solve their problems, such as Dr. Ashbaugh is now doing at the Ohio State University.

Roberts, Ansley H. (Gamma 178), Columbia, Missouri—I am working on my Master's degree. I am doing practically all of my work in Education. I have not selected a subject for a thesis, but have several in mind.

Rowell, Maurice H. (Delta 33), Principal High School, Martinez, California—Recently moved into new $200,000 High School plant, modern in every detail. Took principalship of this school in 1918. Bond issue carried in 1919. Supplementary bond issue carried in 1920. Building started 1921.

Rufi, John (Beta 318), Principal High School, Ironwood, Michigan—I find this a splendid field for work. We have voted and are now planning a new $850,000 high school building. I enjoy my work here.

Rugg, E. U. (Zeta 218), Teachers College, Columbia University, New York City —For three years I have been collaborating with my brother, Harold Rugg and George Schroeppe, on the collection research and organization of a junior high school in the social sciences. This year, 1922-1923, our course has been issued in printed form and is being taught experimentally in over 100 public school classes. The course will be thoroughly rinsed in the light of detailed criticisms that cooperating teachers give. We will also publish monographs setting forth the research and investigations that we are making as a check upon what materials can be justified in the social sciences for junior high school pupils.

St. John, William E. (Delta 82), Teacher in High School, Fresno, California—Am having a rather successful year in debating. So far my teams have won five out of six debates. We are leading Central California Public Speaking League at present, though next debate may change standings. Four more debates scheduled, besides oratorical contest.

Sandiford, Peter (Beta 450), Professor Educational Psychology, College of Education, University of Toronto, Ontario, Canada—At the present time I have under my tuition 200 students (graduate) studying for the High School Certificate of Ontario. Nearly 300 students studying for the M.A., Ph. D., B. Paed or D.Paed degrees. In 1913 when I came to Toronto there were seven candidates studying for the D.Paed degree. The growth of interest in Education is a pleasing feature of one's professional life among Canadians.

Sawyer, W. C. (Zeta 320), Principal Junior High School, Lewiston, Montana—The new building into which I came is a fine two-story building of brick, having 32 rooms with all of the modern conveniences any one could ask. I have had a great job moulding the 320 youngsters and twelve teachers into what I consider to be a Junior High School, and I surely like the work. We have one of the best buildings in the entire Northwest, and I hope in another year to have a Junior High School organization here which will be second to none in the Northwest unless it be Seattle.

Searson, James W. (Beta 233), University of Nebraska, Lincoln, Nebraska—I have recently been associated with Dr. Frank A. Weld in editing the American Educational Digest.

Sinclair, Robert D. (Epsilon 243), Allerton, Iowa—I am teaching Mathematics and Science in my home High School this year and am thinking of returning to the State University of Iowa for my M. A. Degree next fall.

Smith, Harry B. (Beta 359), University of Pittsburgh, Pittsburgh, Pennsylvania—Spent last summer in charge of Part-time Education in University of California. Elected a member of the executive committee of the Pennsylvania State Educational Association.

Smith, Jesse C. (Kappa 166)—Superintendent Maize Consolidated Schools, Maize, Kansas. Working for M. A. at Kansas University, Lawrence, Kansas.

Spaulding, Mayne (Epsilon 81), Mitchell, Iowa—Been farminf since 1917.

Spencer, Lloyd H. (Epsilon 261), Principal High School, Glenwood, Iowa—Daughter (first) Janet Marguerite, born October 26, 1922. Received M. A. at State University of Iowa, July 22, 1921.

Spencer, William L. (Beta 153), Supervisor Secondary Education, State Department of Education, Montgomery, Alabama—I am spending all my leisure moments and some other time in an effort to develop genuine junior high schools in Alabama. We are trying really to provide for the exploratory activities so widely discussed and so seldom offered.

Stahl, Harvey E. (Alpha 150)—I am a "Hoosier School Master," who migrated eastward in the autumn time of 1919 to seek a new environment. My family was a victim of the influenza scourge that swept over the country in the fall of 1918. My wife died with pneumonia following influenza. Delaware had passed a progressive school code and needed superintendents to administer and supervise their city schools. I went to Dover to interview the State Superintendent of Schools, Mr. A. R. Spaid. He induced me to accept the superintendency of the Seaford, Delaware Schools. I remained in Seaford until January, 1922, when the State Board of Education of Delaware chose me as Director of Bureau of Educational Research in the office of State Department of Education. This position I held until September, 1922, when I came to my present position as Superintendent of Claymont Special School District. Since coming to Claymont I have had the experience of helping to inaugurate a school building program. We voted $275,000 School Bonds to build a modern school structure that will house approximately 1,000 school children. The money is now available for the elementary and high school building. Claymont is a rich suburb district of Wilmington, Delaware. The latter city has been termed the "First City in the First State of the Union."

Stark, William E. (Beta 46), Superintendent of Schools, Hackensack, New Jersey—Recently published "Every Teacher's Problems," American Book Company. Paper at Department of Superintendence, Cleveland, March 1, 1923—"The Superintendent and His Teachers."

Stockwell, Lynn E. (Eta 176), University of Minnesota School of Education—Besides my duties as instructor I edit the Eta Chapter news letter. Am working on a study of the compulsory part-time laws already passed by the various states.

Stott, James W. (Alpha 65), Superintendent of Schools, Frankfort, Indiana—Came to Frankfort last summer, August 1, 1922. We are now planning a new Ward School and also a new High School Building. Ward School to be comleted by September 1, 1923, and High School building by September, 1924. For three summers I have been a member of the Indiana University Summer School faculty.

Struble, John R. (Epsilon 220), Superintendent of Schools, St. James, Minnesota—Have been superintendent of schools here for nearly five years and have been re-elected for next year. Elementary and High School pupils are all classified on basis of pupil's showing on a standard intelligence test in connection with the pupil's class standing of preceding semester.

Taylor, William S. (Beta 203)—On leave of absenec this year. Completing work for Doctorate degree, Teachers College, Columbia University.

Thornton, Joseph F. (Beta 21), Indianapolis, Indiana—In September, 1922, was appointed Assistant Superintendent of City Schools in charge of the supervision of teaching in the upper grades throughout the city.

Trueman, George J. (Beta 119)—Have recently been appointed President of Mt. Allison University, Sackville, New Brunswick, and leave Toronto to take that position in June next.

Tupper, Charles R. (Delta 163), Superintendent of Schools, Miami, Arizona—We have been conducting experiments in mental speed measurements for a period of two years and over. Dr. Terman has seen fit to incorporate a Chapter in his "Intelligence Tests and School Reorganization" which describes our work here. We recently conducted a pedigogical and mental test survey of our entire county to secure norms for this part of the county. Have recently received an appointment by the governor as member of the State Board of Education.

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The Truth

Fortunate is he who retains in middle life and beyond the mental power to see and judge fairly.

Wisdom to reject preposterous folly parading as truth, to accept and acknowledge truth when it comes, is what the world needs today as much as when the crowd laughed at the "folly" of the Copernican system, when Galileo was compelled, on his knees, to deny what he knew to be truth, or when the wise predicted that the ships of Columbus would fall over the "edge" of the ocean and disappear in infinite space.

While a man keeps his mind open to truth he is worth while. After that the best thing he can do is die, and make room for a younger, more receptive brain.

—ARTHUR BRISBANE